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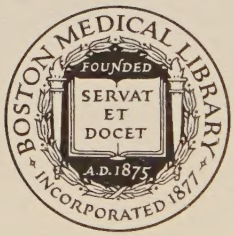

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Aslib Manuals

Vol. 3

PERIODICALS AND SERIALS

their treatment in special libraries

PERIODICALS AND SERIALS

THEIR TREATMENT IN SPECIAL LIBRARIES

by

DAVID GRENFELL

with a foreword by
E. M. R. DITMAS

Second Edition

Aslib

3 BELGRAVE SQUARE, LONDON SW1
1965

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Butler & Tanner Ltd, Frome and London

FOREWORD

In the twelve years that have elapsed since the first edition of this text-book was published, much has happened, in the library world as elsewhere, but the position of the periodical has not greatly altered. The chief developments are indicated in the author's introduction. Much of what I wrote in 1952 remains true now and I therefore make no apology for repeating it.

It is probable that periodicals have been the delight of scholars and the bane of housewives ever since they were first invented. The scholar appreciates a medium of publication that enables him to keep in touch with work in progress in his own and allied fields, work still in the formative, living stage, not yet embalmed in book form. Articles in periodicals can be compared to statements made in conversation, open still to question, spot-lighting the growing points of a subject, without the delay necessary if the whole is to receive adequate treatment, stimulating, therefore, and fertilizing.

To the housewife periodicals are likely to be just 'magazines' of many sizes, too limp to be arranged tidily on book-shelves, with covers that get torn and dirty. Most trying of all, many have separate indexes, dog-eared sheets that are in perpetual danger of being swept away as rubbish; in short, periodicals are a nuisance.

The librarian, in his aspect of custodian—and after all, that historically is one of his oldest and most honourable functions —may be forgiven if he sometimes shares the prejudices of the housewife. To him also the periodical can be a nuisance, easily torn and easily mislaid. Nevertheless, the literary, scientific or technical periodical has come to stay—more, it has won such an honoured place amongst the tools of research that it has attained the right to be treated *sui generis*, and not as a poor relation of the book. In the special library this status has always been acknowledged, but the manuals of librarianship have often been influenced by the outlook of the general library where periodical holdings are less important in comparison with the rest of the stock. Hence the value of a handbook such

as the present, which brings together the experiences of many skilled workers in the field.

Mr Grenfell has had first-hand experience of dealing with periodicals. As Information Officer of Aslib in the days when that organization was growing rapidly, but was still housed in inadequate and unsuitable premises, he had to cope with a collection of unsorted periodicals that had moved with Aslib from one home to another, a white elephant that no one dared to destroy until it could be checked, and it could not be checked without the necessary staff and time. Mr Grenfell had neither sufficient staff nor time, but he did at last bring order out of chaos and much that was valuable was salvaged.

The special librarian or information officer, however, is not only concerned with his own collection of periodicals. It is therefore important that he should know the techniques of lending and borrowing and the policies in general use. Aslib, which set out to be the link between special libraries, became also a last hope for the tracing of periodicals not easily obtained through ordinary channels and Mr Grenfell had to cope with many difficult cases where success was due to patient investigation over a wide field coupled with the sleuthing instinct that should be part of the make-up of all information officers.

Some may criticize this handbook because it caters both for the trained librarian, who should know already much of the elementary information, and also for the beginner who is experiencing his first contacts with periodicals as tools for research. This dual approach has been deliberate and is the result of the author's experience at Aslib. All too often the member who sought help turned out to be some unfortunate clerical assistant asked by the management of his firm to 'start a library' without adequate assistance or equipment. It is, of course, easy to say that such cases should not arise; in the best of all documentation worlds no library or information centre would be started without fully trained and experienced personnel, but in the meantime it seems unfair to penalize those who, through no fault of their own, have to pick up their training as they go. On the other hand, to publish two books, elementary and advanced, would be an unnecessary elaboration of tools for a relatively small section of special librarianship.

Throughout the work the practical approach has been kept

in mind; it is a text-book written by one who knows, not theoretically but by actual experience, just what it means to organize a collection of periodicals for use and service. The present edition has been extensively revised and expanded to cover recent developments and it is my hope that the book will continue to help those who face this particular task of librarianship.

E. M. R. DITMAS
Formerly Director of Aslib

Aspley Guise
July 1965

INTRODUCTION

PERIODICALS came into vogue in the seventeenth century with the *Journal des savants*, and it would be difficult to over-estimate their value, and particularly their effect on the progress of science; indeed, the publication of a journal or similar organ is quite often the chief *raison d'être* of a learned society or organization. Despite rising costs, periodicals are on the increase and keep hundreds of thousands of specialists, including the librarian, informed of the latest developments in a particular field. In the *British journal of experimental pathology* (1929) appeared Sir Alexander Fleming's first description of the bacteriostatic action of penicillin, whilst the *Transactions* of the Royal Society have been a most effective agency in influencing the growth of science. In the humanities also, the periodical literature has had an equally effective influence, and what better source has the social historian than the contemporary periodical records of a decade?

Periodicals, then, must necessarily form the backbone of the modern special library. This book can perhaps be described as a survey of the problem of periodical literature in the special library; it is not in any sense a complete treatise on the subject, but, I hope, a work which will not only make the beginner in special library and information work aware that more than common sense and a knowledge of the alphabet is required to organize a collection of periodicals, but also to act as an *aide-mémoire* to those more advanced in the profession. Practices rather than principles are described, and since these practices vary considerably, the reader is given the material to make his own decisions. He should consider carefully the examples given; they may require adaptation if they are to answer adequately the needs of a particular library, since every library must adopt methods which are considered to be suitable to its purpose.

Theory has been emphasized in Andrew D. Osborn's *Serial publications* (Chicago, American Library Association, 1955), a truly excellent manual which should be read by all students. Osborn's chapters on cataloguing, in particular, are so good

that I have not tried to emulate them. Nor have I attempted to cover abstracting and indexing or the organization of the subject contents of periodicals. Wilfred Ashworth's chapter on abstracting in the Aslib *Handbook of special librarianship* (2nd edition, 1962) is a comprehensive coverage of the former, whilst the other processes have been dealt with, not only in the *Handbook*, but also in many other publications.

Appendix I, 'What is a periodical?—or serial?', has been retained in this edition for the guidance of the student, although Osborn rightly points out '. . . it seems wiser to adopt a working definition than to confuse both theory and practice with endless exceptions and borderline cases. Fortunately the choice of terms and the definition of a serial or a periodical are among the least consequential of their library aspects.'

Generally speaking, methods have not changed a great deal since the first edition of this book ten years ago. The value of periodicals in the dissemination of knowledge and in the library has been increasingly recognized; the Library Association's *Five years' work in librarianship*, 1956–60 included a chapter on the acquisition and use of periodicals for the first time in this survey. The promotion of better periodicals collections in public libraries was one of the objectives of D. E. Davinson's *Periodicals: a manual of practice for librarians* (2nd ed., Grafton, 1964). Librarians will regret the disappearance of *Serial slants* (vols 1–4, July 1950–October 1958), the official organ of the Serials Round Table of the American Library Association, but *Library resources and technical services* has filled the gap.

The main problem remains that of continued output and rising costs. The use of foreign periodicals has increased, particularly where cover-to-cover translations are available. Standards in form and presentation and in indexing have made their appearance and an awakening interest in mechanization and in microreproduction is apparent. A variety of union catalogues has been published, including the invaluable and long-awaited *British union catalogue of periodicals*. Foreign periodicals are easier to procure and the emphasis given to them by the new National Lending Library for Science and Technology is particularly welcome. The Library Association's sponsorship of the *British technology index* and the *British education index* is encouraging for special librarians, together with the appearance

of the new *Humanities index*. The one significant development in conservation is binding for individual issues; equipment generally has made little progress—display still remains a problem.

My thanks are due to the Art Metal Construction Co., Messrs C. W. Cave & Co., Ltd, Microcard Editions, Inc., the Readex Microprint Corporation (U.K.) Ltd, and the University of London Library for the use of blocks and photographs, and to the American Library Association, Mr J. E. L. Farradane, Miss Ruth Jacobs, the Library Association, Mr W. J. Merrick, Mrs Mary Robinson, and the late Mr H. R. Verry for permission to reproduce diagrams and portions of text.

I should also like to make grateful acknowledgment to Miss Dorothy Hamerton, Mr G. P. Henderson, Miss H. Margaret Gummer, and Dr A. J. Walford for their suggestions and encouragement, and to Sr Jorge Grossman who was responsible for the Latin American edition published last year.

Amersham, 1964 D. G.

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CHAPTER I

THE MATERIAL

1.1 Definitions

What is a periodical?—or serial? In this book the term 'periodical' has been interpreted as a publication in a continuous series with a consecutive number and no predetermined end, as distinct from a single work in separate parts. This broad interpretation has several advantages, and the author's reasons for using it are perhaps justified in Appendix I, where the various definitions of a periodical and a serial are considered. To have adopted the term 'serial' and carried it to its logical conclusion, as recommended by some authorities, would have meant treating the publications of learned societies, etc., as separate entities, and including government and similar publications which require special treatment.

1.2 Groups or types of periodical

When attempting to classify periodicals into groups or types it is an obvious advantage to use the definition of a periodical in its broadest sense. J. H. Gable, in his *Manual of serials work*, has divided them into these groups (1):

(1) Those intended to foster the interest of knowledge.
(2) Those intended to foster the interests of a trade, profession or society.
(3) Money-making ventures. (Intended for popular appeal.)

This classification, however, is limited to Mr Gable's own ideas of what constitutes a periodical. In this country it is generally accepted that the following are the three main different types of periodical:

(1) The publication of societies and other organizations.
(2) House journals, i.e. the publications of firms and similar bodies.
(3) The independent periodicals.

Broadly speaking, these categories fall into Mr Gable's classification, although each class or type warrants a closer examination.

1.21 Publications of societies and other organizations

Into this class come *Memoirs*, *Proceedings* and *Transactions*. Inasmuch as these publications may be considered as the work of a society or organization acting through its members and in some cases lack a variety of authorship (one of the main characteristics of a periodical), it may be argued that they are not periodicals—an argument which is usually ignored, as it has been, for instance, in the Royal Society's *Fair copying declaration*.

Examples of this type of periodical are:

Aslib proceedings
Proceedings of the Royal Society
Memoires de l'Académie Royale des Sciences Morales
Transactions and proceedings of the Botanical Society of Edinburgh
Transactions of the Royal Entomological Society of London

In a similar category are the *bulletins* and *journals* of societies and other organizations. Not all have the words 'bulletin' and 'journal' in their title, however, but may enjoy a distinctive title of their own. A great number of government publications come into this category.

Examples:

Library Association record
Journal of documentation (Aslib)
International affairs (Royal Institute of International Affairs)
Board of Trade journal
Ministry of Labour gazette
Journal of the Linnean Society of London
Bulletin of the Imperial Institute
Agriculture; the journal of the Ministry of Agriculture
Chemistry and industry (Society of Chemical Industry)
Quarterly journal of forestry (Royal Forestry Society of England and Wales)

These periodicals usually contain written contributions from a variety of authors and differ from the *memoirs*, etc., in that the contributions or articles do not usually emanate from conferences or meetings.

1.22 House journals

House journals are the publications of firms and similar bodies, as well as other organizations, usually distributed free, and are of limited circulation. Some contain only news items of an ephemeral nature, and some matter of a trade or advertising nature, while others, particularly in the technical field, are very specialized and contain much fundamental work.

Examples:

Silk and rayon users' bulletin
Platt's bulletin
English electric journal
Barclay's Bank review

Another type of publication that can be included in this class and which is often overlooked is the bulletins issued by libraries, such as the *R.I.B.A. library bulletin* and the *Wiener library bulletin.*

1.23 The independent periodicals

This class of periodical is by far the most numerous. Although all, strictly speaking, come into Mr Gable's 'money-making ventures', many of them also 'foster the interests of a trade, profession or society'. They cover the whole field of knowledge and range from such academic periodicals as *Nature* to the cheap story and sex magazines. Into this class come also the newspapers, the trade and technical press (2), as well as the great literary reviews.

1.3 Frequency of publication

For all types of periodical the most common frequencies of publication may be designated as follows (3):

(1) Daily (one or more times a day, except that, in some cases, Saturday, Sunday or Monday is omitted).
(2) Semi-weekly (twice each week, on definite days, 104–105 issues each year).
(3) Weekly (once a week, on definite days, 52 issues per year).
(4) Fortnightly (every two weeks, 26–28 issues a year, depending on week-day on which published and its relation to the first day of the calendar year).

(5) Semi-monthly (twice each month, 24 a year; usually on definite dates, e.g. 1st and 15th).
(6) Monthly (once each month, 12 a year).
(7) Bi-monthly (every two months, 6 a year).
(8) Quarterly (every three months, 4 a year).
(9) Annual (once a year).
(10) Biennial, triennial, etc. (twice, three times a year, etc.).[1]
(11) Irregular (varying in frequency).

Some periodicals combine frequencies, such as the *Library journal*, which is a semi-monthly except during the summer months, when it is issued monthly. Other periodicals, particularly in the educational field, publish monthly except June, July, August, or any one or two of these months. Many publications issue separate sections, or supplements, regularly or irregularly.

1.4 Title pages and indexes

If an index is published the title page is usually issued with it. If no index is published there may be a title page or table-of-contents, or both, which should be bound at the beginning of the volume. Indexes are either issued in regular pagination, intended to be included at the end of the volume, or are paged separately in Roman or Arabic numbering. If no index is issued for an individual volume, a cumulative index may be published from time to time.

A checklist on the title pages and indexes to over 2,290 British and foreign periodicals was published in 1961 (4).

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(1) Gable, J. Harris. Manual of serials work. Chicago, American Library Association, 1937, p. 19.
(2) Dangerfield, Roland E. The trade and technical press. *Journal of the Royal Society of Arts*, vol. XCVI, no. 4786, April 9, 1948, pp. 292–304.
(3) Gable, J. Harris (*op. cit.*), p. 29.
(4) Hafner Publishing Company. T.P.I. list: a check-list on the title-pages and indexes of over 14,000 British, 400 French and Belgian, 150 Italian, 65 Spanish, and 275 Dutch and Scandinavian periodicals. New York, London, the Company, 1961. [76] pp. tables.

[1] In this country, biennial, triennial, etc., usually mean every two years, three years, etc.

CHAPTER II

ACQUISITION

2.1 Sources of material

The acquisition of periodical publications may be accomplished by the following methods:

(i) SUBSCRIPTION (OR PURCHASE). Annual subscriptions to periodicals are usually placed with an agent or bookseller and paid for in advance, except in the case of annuals and similar publications. Subscriptions to titles which may be purchased at a discount by dealing direct with the publishers are called *direct subscriptions*. The publishers may include societies who issue certain publications at reduced rates for members and consequently insist on dealing directly with the library if the library is a member. All subscriptions are usually paid for out of the library's general book fund. In some special libraries these may amount to more than 50 per cent. of the fund.

(ii) MEMBERSHIP OF LEARNED SOCIETIES, ETC. In the special library field particularly, libraries are often part of an organization or firm which is a member or corporate member of learned societies and research associations. The membership subscription usually includes at least one periodical publication free. In such cases the librarian should insist that all publications received by the organization as a result of this membership should be deposited in the library. This also applies to those publications which are received by members of the staff of an organization whose individual membership subscription to a learned society, etc., is paid for by the organization.

(iii) GIFT. Periodicals received regularly as gifts usually take the form of house journals, etc. Occasionally, however, a member of an organization to which a library might be attached or other interested individuals pass on to the library a periodical to which they subscribe and cannot house. Various government information services and similar organizations are also willing to place libraries on their free mailing lists for bulletins, etc. Similarly, some publishers offer to send libraries free copies of a periodical in order to attract further readers. Other gifts

may take the form of files of bound or unbound current and back numbers of duplicate periodicals from other libraries. One of the most important functions of Unesco's Clearing House for Publications, Place de Fontenoy, Paris, 7e, is to co-ordinate the distribution of this gratuitous material, and each month they publish in the *Unesco bulletin for libraries*, under the heading 'Free Distribution', a list of organizations under their country of origin, with details of material they have to give away. Although the largest percentage of the material is books, a considerable number of periodical publications is also included. Unless specifically requested, enquiries regarding the material listed should not be sent to the Clearing House, but to the libraries and institutions by which it is offered.

In this country, both the *Library Association record* and *Aslib proceedings* list periodical publications for disposal by libraries to other libraries willing to pay the cost of carriage.

It should not be necessary to add, however, that libraries should not solicit or accept as gifts periodicals which do not come strictly within their terms of reference. It is always difficult to refuse a gift, but the would-be donor should be persuaded to send particulars of what he has to offer to one of the national clearing houses mentioned in the next section or to Unesco's Clearing House, who will see that the gift will find a home in a library which may be in urgent need of such material.

(iv) EXCHANGE. Barter, or trade by exchange, finds an early place in history. Getting something-for-something-else is common practice amongst libraries. Apart from duplicate material some libraries, particularly those attached to learned societies, etc., will have their own publications to offer for exchange. The value of an exchange scheme can only be measured by the publications which are received in return since these must be set against any loss of income received from subscriptions. In many cases, however, it is the only way of overcoming international barriers. Apart from currency restrictions, many countries are very severely limited by other considerations in the periodicals they may import and consequently exchange is the only source of supply. Libraries which have no publications of their own may find it convenient to purchase British periodicals to exchange for those of foreign

organizations, particularly in Eastern Europe. The goodwill engendered by such a scheme can make a decisive contribution towards the international communication of information.

Unesco was quick to realize this, and to encourage the redistribution of redundant books and periodicals and to make out-of-print material available to a library which has been searching for it for a long time, as well as other material available for exchange, published a *Handbook on the international exchange of publications* (2nd ed. Paris, Unesco, 1956. 509 pp.), Part II of which is an international directory of organizations which are willing to exchange publications. Criticism of existing international agreements led to the adoption of new conventions in the exchange of publications by Unesco in 1958 (1, 2). In the *Unesco bulletin for libraries*, under the heading 'Exchange', readers will find listed publications which libraries and institutions have to offer for exchange purposes. Applications for this material should be made to the organizations by whom it is offered and not to Unesco.

Eileen Bogan, dealing with acquisitions in the *Handbook of special librarianship and information work* (3) points out '. . . the exchange of redundant material . . . has a greater opportunity for success on a national rather than a subject or regional scale. That it is possible for a librarian to offer to another duplicate . . . periodicals in fields which he knows or guesses to be of interest is obvious, but the chances of such material being accepted are rather slight. In all probability it will have been obtained long ago in the course of the usual process of acquisition, and will only be acceptable if duplicates are required. The solution therefore is to advertise the offer over a wider field, regional, subject, or national. Certain subject groups have a scheme whereby their members are informed of all offers within the group, thus giving them the chance to complete and add to their collections or, in the case of the medical libraries, have a central pool in which all members deposit their unwanted material, where it may be checked against the "wants lists" of the other libraries (4). But all too often the material is common to most members of the groups and, apart from supplying odd missing issues, there is little redistribution. The greatest measure of success lies therefore in the national scheme.'

In this country the official exchange centre is the British National Book Centre, housed at the National Central Library (5–6). The Centre, which was evolved from the war-time Inter-Allied Book Centre, was established to co-ordinate the inter-change of redundant material both within this country and between this and other countries. It is the intention to accomplish this, whenever possible, not by receiving and handling the books themselves but by acting as a central bureau, recording and circulating lists of material available and wanted. A library wishing to participate in the scheme is required to subscribe to the monthly lists (£2 10*s*. per annum for the periodicals lists) and to make known to the Centre those volumes or parts which it wishes to receive; it is also required to inform the Centre of its offerings on specially provided cards. The Centre will avoid handling the material wherever possible, merely informing the library where the material is to be sent. Although long runs of periodicals are sometimes available, short runs and odd issues can be obtained more frequently to complete a collection at little expense, since the material is dealt with only as free gifts. Periodicals can be disposed of through the BNBC without subscribing to the services.

In the United States, the International Exchange Service, Smithsonian Institution, Washington 25, D.C., was started as long ago as 1851, and is the official exchange agency of the United States Government. Exchange material consists of research and official publications, but not those issued by industrial and commercial firms or commercial publishing houses. Their agency for this country is Wheldon & Westley, Ltd, Booksellers and Publishers, 83/4 Berwick Street, London, W.1.

The United States Book Exchange, Inc. (or USBE), 3335 V Street, N.E., Washington, D.C., has been organized to serve as the national bureau within the United States for the international exchange of publications between and among libraries in the United States and in other countries. It is a private, non-profit corporation consisting of representatives appointed by library associations, councils of scholarly societies, the Library of Congress, and the Smithsonian Institution. Functionally, it serves all libraries that wish to partici-

pate, maintaining a co-operative reservoir into which each institution can channel materials it does not need and from which each can obtain, for the cost of handling, books and periodicals it wants. USBE has 1,100 library members in the United States and Canada and approximately 1,300 in other countries of the world.

Edwin E. Williams, in an article on a survey by USBE proposing collaboration with other national exchange systems in the United States, has described the activities of these other national exchanges which do not maintain reservoirs or charge handling fees (7).

Three of the systems are very simple, consisting of groups of libraries that have agreed to send one another their current lists of duplicates. Approximately 80 libraries participate in an exchange scheme sponsored by the Science-Technology Division of the Special Libraries Association; the American Theological Library Association exchanges lists, whilst the American Association of Law Libraries provides for central listing of the material that is offered. The Metals Division of the Special Libraries Association and the Medical Library Association centralize allocation as well as listing. The Metals Division issues from four to five lists per year and, aside from USBE, is the only system that handles wants as well as offers. The Medical Library Association exchange is the oldest in the United States and, except for USBE, the largest. A similar scheme for medical libraries is in operation in England, enquiries, regarding which should be made to Medical Exchange (Wellcome Historical Medical Library) 183 Euston Road, London, N.W.1 (8). The other national exchange system in the United States is the Duplicates Exchange Union, which was transferred from the Association of College and Research Libraries to the Resources and Technical Services Division of the American Library Association. This service is primarily for college libraries. Mr Williams suggests that USBE could be strengthened if members of these American exchange services could hand over to USBE those duplicates that are not disposed of when offered to members of its own group. In addition to proposing collaboration with national exchange systems, the USBE survey recommended that experiments be undertaken in establishing local and regional clearing houses.

For details of further exchange services, readers are advised to consult the Unesco *Handbook* which also contains a subject index.

2.2 Selection, including aids

The general principles of periodical selection do not vary essentially from those governing the selection of books. The factors governing selection depend on (1) the financial resources of the library, (2) periodicals already taken, (3) the scope of the library, (4) demands of readers, and (5) whether the title is easily available elsewhere.

Andrew D. Osborn emphasizes that 'Serial selection, like book selection, is an art, not a science. Its skilled performance depends primarily on the exercise of trained, informed judgment. There are, however, certain principles and procedures that are relied upon by the experienced librarian in determining whether or not to add a new serial title to the collection, among which the following should be emphasized.

Acquire the tools that open up the literature of a subject or country.

Acquire titles that are analyzed in standard indexing services.

Give special attention to the acquisition of the basic journal or journals in any field of interest.

Whenever possible and desirable, obtain sample copies to make the selection process more judicious.

In order to maintain a systematic program of serial selection, check *New Serial Titles* each month. In many libraries certain supplementary lists should be checked regularly too.

Enrich the resources of a locality, region or group of libraries by carrying out, just as far as possible, a program of cooperative acquisition.

In each area develop a coordinated program for the preservation of local publications.

Build up serial files on the basis of long runs, not broken files. In the case of annuals and other low-frequency serials, however, rather than do without a worthwhile title altogether, consider subscribing to every second or third issue.

In research libraries, allocate a sum of money each year for the purchase of sets and back files to round out the collection. When originals cannot be procured, acquire microreproduction.

Control duplicate subscriptions on the basis of relative values. Which will further the library's program to best advantage: extra copies or additional titles?

Always think of the possibilities of acquiring a title by gift or exchange. These methods of acquisition are extensively employed in serial procurement. They help immeasurably in enriching a collection.

Review each entry on the visible index every three years or so to see whether the title or the extra copies are still worth while' (9).

Another factor to be kept in mind in periodical selection is the ratio between the book budget and expenditure on periodicals. All libraries are familiar with demands for economy which may affect both types of material. In the majority of special libraries it would be wiser to cut expenditure on books. These can be acquired at a later date, whereas it may be difficult to obtain back files of periodicals.

K. B. Shaw (10), dealing with selection policy, stresses that nearly every characteristic or quality of a periodical may be subject to change and has drawn up a list of such variables which is given below. Although they are grouped, the order is not significant; asterisks indicate cases where change might affect the value of a periodical to a library.

*Title
*Frequency
*Price
Format
Numbering of volumes and parts
Pagination
*Division into two or more periodicals, or amalgamation
*Issue of supplements
Issue of individual papers as 'separates'

Publisher
*Town and country of publication
*Language, and presence or absence of summaries in other languages

*Subject
*Breadth of coverage of subject

*Public aimed at
*Restriction of circulation
*Presence or absence of: Editorial comment
Advertisements
Notes of current trade topics, etc.
Indexes
Abstracts
Book reviews
Illustrations

*The periodical can suspend publication, either temporarily, or permanently.

The foregoing remarks apply directly to current periodicals. In scholarly research in particular, the value and importance of a periodical is not measured solely by its modernity. Building up a library is never an automatic business and when considering what periodical sets to buy, their numbers alone enforce selection both of the titles to stock and the length of run. To assist librarians to build up periodical collections in many diverse fields about which they lack expert subject knowledge, a comparatively simple technique was formulated in 1927 by P. L. K. and E. M. Gross (11). Basically the technique is to check footnote references, or citations, to all periodicals appearing in one or more standard periodicals on a given subject over a determined period. All the periodicals cited are ranked in order of frequency of citation and this ranking is regarded as the order of importance of these periodicals in the subject. It should be borne in mind, however, that applied scientists are probably less inclined than pure scientists to make copious source references and lists of most cited journals should not be indiscriminately applied.

An important and scholarly work on the subject of periodical citation is Charles H. Brown's *Scientific serials* (12), containing an interesting table showing the percentage of citations from different decades, for different subjects in pure science, the fall-off of citations with time is most accelerated in a developing subject such as physics and least rapid in zoology. The citation technique has been used by Robert E. Burton to develop lists of the most cited journals in the fields of chemical, mechanical and metallurgical engineering (13–15). Burton also emphasizes that a bewildering variety of styles was encountered in the 6,454 citations found and makes the point that consistent

forms of reference are essential to the rapid retrieval of periodical literature.

In counting references quoted in the literature, however, abstracting journals should not be overlooked. A count should be made of the number of citations of each journal in as many abstracting periodicals as possible, weighing them in accordance with the usefulness of the abstract to the particular library in each case. P. F. Cole, in a survey made in 1958 (16), found that a list of most used journals correlates very much better with an abstract count than with a reference count.

B. C. Vickery (17), discussing the problem of buying periodical sets, considers that a count of borrowing is a more reliable method than the 'frequency of citation' method. He states, 'This is even more certain when we are providing periodicals, not for a broad and well-defined field (e.g. organic chemistry), but for a research station with diverse interests. In a library newly started, it will be necessary to use all three aids to selection: the advice of subject specialists, study of the citation in standard journals (including abstracting journals), and, as data on external borrowings mount up, study of these as well.

'The loan figures will also be a guide to the length of run which should be purchased. A particular periodical volume may be used only once or twice in the life of a library, so that it is not worth buying; or it may be used more frequently. To have some test to decide when purchase is justified would be useful, and loan figures do suggest such a test.' This is borne out by the results of one survey which was based on an analysis of loan slips made for one year which offered facts on which to base a consistent periodicals policy for the Royal Aircraft Establishment Library (18).

A survey of fifty-two information/library units in industrial and commercial organizations carried out in 1956–8 by Aslib (19) covered the acquisition of periodicals and is of some significance. Two-thirds of the organizations took between 100 and 300 periodicals. The median number taken was 210. One periodical in twelve was in a foreign language. The size of an organization (total number of employees) bore little relation to the number of titles it took. Considering that there are some 50,000 periodicals in the field of science and technology

(perhaps half of them in the English language), it is significant that only one of the units included in the survey took more than 1,000 titles. In the published results of the survey it states, 'There may be conventional reasons for this—conventions about the amount of money to be spent on periodicals; but the figures (which confirm general experience) suggest that there may be a "natural law" in accordance with which the number of periodicals needed to give what is thought to be "adequate" coverage of any subject is of the same order—a few hundreds—irrespective of central subject. It seemed possible, however, that an upper limit to the number of periodicals taken was set by the number of information/library staff available to handle them. The organization taking the largest number of periodical titles also had the largest information/library staff'(20). In general, the figures for foreign language periodicals probably reflect ability to read foreign languages much more than they reflect the industrial and commercial importance of a country and the number of its periodicals. Since the survey was made, Soviet literature has become more easily available and much better known, particularly through cover-to-cover translations. The survey also points out that abstracting journals provide one of the chief means of learning of the existence of current foreign work and thus supplement the reading of the original foreign journals themselves. Six organizations which took no foreign language periodicals took some abstracting journals.

When a library does not aim at inclusive acquisition in a subject that it wishes to cover, its first endeavour should be to acquire those periodicals which are regularly indexed or abstracted in the standard indexing and abstracting journals. The primary aid for subjects covered by these media is the lists of periodicals indexed and abstracted in each case. These are usually listed in the front of each journal. This principle applies to the acquisition of back files and older titles just as it does to current periodicals. Although these specialized indexes may be too inclusive as a selection aid for a library working in a restricted field, such as apiculture, their importance as materials for research and information cannot be too greatly emphasized. Even though they are expensive, the librarian should have these tools if he is to give an effective service.

Although the periodicals indexed or abstracted may not be acquired they can be borrowed or consulted elsewhere.

Details of these indexing and abstracting journals will be found in the following publications:

American Chemical Society. List of periodicals abstracted by *Chemical Abstracts* with key to library files and other information. 2nd ed. Columbus, Ohio, Chemical Abstracts Service, 1956. 314 pp. Suppl., 1959. 40 pp.

Brombacher, W. G., *and others*. Guide to instrumentation literature. Washington, Government Printing Office, 1955. 156 pp. (National Bureau of Standards Circular 567.)

Fédération Internationale de Documentation. Abstracting services: an index to material collected by F.I.D. in 1962/63. The Hague, The Federation, 1963. 102 pp. diagrs. mimeo. (F.I.D. Publ. 352.)

Fleming, Thomas P. Medical abstracting journals and services. *Special libraries*, vol. 53, no. 6, July–August 1962, pp. 322–5.

Gray, Dwight E., *and* Bray, Robert S. Abstracting and indexing services of physics interest. *American journal of physics*, vol. 18, no. 5, May 1950, pp. 274–99.

Index bibliographicus: directory of current periodical abstracts and bibliographies. Paris, Unesco. The Hague, FID, 1952–1964.
Vol. 1: Science and technology. 4th ed. 1959. 118 pp.
Vol. 2: Social sciences, education, humanistic studies. 4th ed. 1964. xi, 34 pp.

Maichel, Karol. Soviet scientific abstracting journals. *Special libraries*, vol. 50, no. 8, October 1959, pp. 398–402.

Moore, C. K. Abstracting journals in the electronics field. *Aslib proceedings*, vol. 13, no. 3, March 1961, pp. 65–75.

National Federation of Science Abstracting and Indexing Services. A guide to the world's abstracting and indexing services in science and technology. Washington, D.C., 1963. viii, 183 pp. (Report no. 102.)

Neelameghan, A. Current indexing and abstracting services in the medical and related sciences. *Annals of library science*, vol. 7, no. 4, December 1960, pp. 101–16.

Royal Society. Abstracting Services Consultative Committee. A list of periodicals and bulletins containing abstracts published in Great Britain, with appendix giving partial list of journals . . . published in the British Commonwealth. London, Cambridge University Press for the Royal Society, 1950. 79 pp.

Special Libraries Association. Science-Technology Division. Engineering Section. Committee on Engineering Abstracting Services. Bibliography of engineering abstracting services, edited by Miriam M. Landuyt. New York, the Association, 1955. iii, 37 pp. (SLA Bibliography, no. 1.)

Toase, Mary, *editor*. Guide to current British periodicals. London, Library Association, 1962. ix, 256 pp.

Ulrich's periodicals directory: a classified guide to a selected list of current periodicals, foreign and domestic, edited by Eileen C. Graves. 10th ed. New York, Bowker, 1963. xii, 667 pp.

VAROSSIEAU, W. W. A survey of scientific abstracting and indexing services. The Hague, International Federation for Documentation (F.I.D.), 1949, pp. 22. (Publication no. 236.)

WALFORD, A. J., *editor*. Guide to reference material, edited . . . with the assistance of L. M. Payne. London, Library Association, 1959. viii, 543 pp.

WORLD HEALTH ORGANIZATION. Current indexing and abstracting periodicals in the medical and biological sciences; an annotated list. 2nd ed. Geneva, the Organization, 1959. 85 pp.

The periodical sections of the *Aslib guides to sources of information in Great Britain* contain separate lists of periodicals publishing abstracts.

As an extra guide, the selector should consult with other librarians and the specialist users of the library.

It is important to have journals containing original contributions. These will generally be found in the publications of the learned societies, etc. The Royal Society have published a list of British scientific publications reporting original work (see p. 192). The usefulness of periodicals in languages other than English will depend on the familiarity of the staff and readers with these languages.

After the decision has been made to add certain types of periodical to the library, specific items must be chosen. Apart from the lists already given, in Appendix II will be found some lists or guides, roughly described as 'national bibliographies', which will be of assistance in this connection and usually contain details of publisher and frequency, and occasionally a subject arrangement and subscription rates. The newcomer to library work may perhaps find these lists too extensive; many of them are out-of-print, and some were published fifty years or more ago and are of little use for present-day journal selection. They have been included, however, as a guide to those libraries wishing to acquire the older periodicals and as an aid to reference work. Those interested solely in the more recent periodicals will obviously have to confine their attention to the more up-to-date items, whilst for subject coverage those listed in the International (Special) section will be found most useful.

These lists, however, are but a sample of the many hundreds available. Details of further lists will be found in many works of reference, such as Theodore Besterman's *World bibliography of bibliographies*, 3 vols. (2nd ed., London, 1947–9), Constance

M. Winchell's *Guide to reference books* (7th ed., Chicago, 1951), R. Staveley's *Notes on subject bibliography* (London, 1962), and *Union lists of serials: a bibliography* compiled by Ruth S. Freitag for the General Reference and Bibliography Division of the Library of Congress (Washington, 1964). This bibliography cites 1,218 union lists, and the entries from fifty-six countries are geographically arranged. There are also three indexes: an index of names, a subject index, and a geographical index. This is the first attempt since that of D. C. Haskell and K. Brown in the *Union list of serials* (2nd ed., New York, 1943, pp. 3055–65).

With the assistance of these guides (and specialized advice) it is possible to prepare a tentative list of the periodicals that the library may reasonably acquire. A good method is to enter each title on a separate card, giving publisher, subscription rate, the source of the title, and, if possible, an appraisal of the journal. If the journal is ultimately selected for the library, the card may later be used as an order record (see p. 24). By a process of elimination it is possible to prune down the lists to the limits of the library budget, but the *cards should be saved for consideration at some future date when the budget may be increased.* Most organizations require approval of the selection, either by the library committee or director. In the case of a library committee a typed list must be submitted which can be quite easily made from the cards.

2.21 New periodicals

Unfortunately, there can never be a permanent periodical list. Some improve, but others decline in value and must be discontinued, whilst the librarian must always be on the alert for new or better periodicals. New periodicals are always appearing and must be ordered if the collection is to be kept up to date.

Finding details of these new periodicals is not easy. Most publishers include in their catalogues details of any new titles for which they are responsible and advance notices are usually circularized to all types of libraries. At the same time, the librarian should be constantly on the look-out for reviews or notices of any new journals by consulting regularly all types of periodical. In this country all new British periodicals appear in the *British national bibliography*, which is published weekly.

The Times literary supplement covers new literary periodicals in its feature, 'Current Periodicals'. *College and research libraries* gives a survey every six months of new periodicals which have appeared during that period. The *Library journal* also runs brief reviews of new periodicals published in English. Other periodicals which note them include *Aslib proceedings*, *Unesco bulletin for libraries*, *Stechert-Hafner book news*, *Nature*, *O.S.R. news*, and the Library of Congress's *New serial titles*. Most journals, however, include them in their review sections. The accessions lists of various libraries, particularly government libraries such as the Science Museum Library, the National Lending Library for Science and Technology and the Victoria and Albert Museum Library, regularly record new periodicals received. In addition, notes of new periodicals are a regular feature in the preliminary pages of the various H. W. Wilson indexes. The Information Section of Aslib maintains an index of new periodicals for the benefit of members as well as a file of specimens where obtainable.

2.3 Co-operative acquisition

One of the most important problems in periodicals acquisition, however, is that of co-operative acquisition. It is of no importance if several neighbouring libraries buy the same book, but it is a questionable point whether they should all buy, bind and store copies of the same periodical. It is impossible for the librarian to acquire and house every periodical he might like to have, particularly in view of problems of space.

One of the recommendations of the Royal Society Scientific Information Conference, held in 1948, was:

'10.3. *Library co-operation.*—Library committees are urged to give more attention to co-operation between libraries with the object of reducing undesirable duplication and of extending access to a great proportion of the world's literature. It is suggested that co-operation should commence in local areas, and that regional centres should be linked with national and international systems of interchange.'

In January 1949, following the Royal Society Conference, the Library Association set up a working party on Library and Information services. This working party published its final report on co-operation and the provision of specialized material

in the *Library Association record*, vol. 59, no. 17, July 1957, pp. 235–7. This report emphasizes all too clearly the difficulties of implementing any wholly centralized national scheme of subject specialization, stating that the improvement of bibliographical resources as an aid to research must involve the provision of government funds on a very much larger scale than hitherto. These plans have, however, been made difficult to accomplish by the multiplicity of ideas pursued independently in other quarters

The Government has decided to establish a National Reference Library of Science and Invention to be formed as part of the British Museum Library, though housed as a separate unit; the library will be built up and expanded from the existing Patent Office Library (21). It had previously authorized the Department of Scientific and Industrial Research to develop a National Lending Library of Science and Technology, which is located at Thorpe Arch near Boston Spa, Yorkshire, and which started a proper though still incomplete service in 1962 (22). The demand has been voiced from several quarters that these national libraries should hold between them a reasonably complete collection of the world's scientific and technical literature. As already stated, few industrial and commercial libraries acquire more than three hundred periodicals and it is therefore of vital importance that this collection of periodicals be readily available for reference. There is also some justification for the argument that the national demand for little used material would be so slight that one centrally located set of such material would meet all demands likely to be made on it, although this argument has been countered by R. M. Bunn (23). To begin with, nothing the National Lending Library can do at present will replace the informal arrangements between libraries in the same area.

Mr D. T. Richnell has outlined some of the problems in providing a National Library or a National Lending Service for the Humanities (24). Since the relative tempo of research in the humanities was much slower than in the sciences, older material in the humanities tended to be of permanent value. Thus any proposed National Library for the Humanities would need to have constantly available a vast collection of books and periodicals to meet research requirements, together

with efficient means for locating material not held in the central collection. The establishment of a *new* library on the required scale will be different, but Mr Richnell has advanced the thesis that, by utilizing our existing resources to the full, it would be possible to make a beginning with a national lending service, using the existing National Central Library as a nucleus. The function of the National Central Library as a clearing house for inter-library loans should continue, but should gradually become subservient to its function as a national lending library; there would be a statutory obligation for the regional bureaux to become individually self-sufficient for all modern British works. Such self-sufficiency, however, may only be possible by the amalgamation of various regions and securing the maximum participation in the schemes of non-public libraries on which, admittedly, no statutory requirement can be laid. Responsibility for current foreign publications should lie with research libraries, but responsibility for older British and foreign materials cannot be so clearly assigned. However, the publication of the *British union catalogue of periodicals* and other lists of periodicals have eased the problem of locating the older periodicals.

It remains to be seen how the co-operative schemes advocated will work out, as well as the related problems being considered by the Library Research Committee of the Library Association. Meanwhile there are various informal and formal agreements between libraries specializing in certain fields delimiting their mutual spheres of interest in the purchase of periodicals. The Aslib Subject Groups, although not co-operative purchase schemes, have, in some cases, produced union lists of their holdings which may well affect purchases by members of these groups. Small groups of librarians working in the same subject circulate between themselves their holdings lists; this is sometimes done on the regional as well as the subject plane. A remarkable instance of this is the Sheffield Interchange Organization (SINTO), which has done much valuable work and in 1958 completed twenty-five years of technical library co-operation. SINTO was the first fully effective scheme of this type and now has about fifty member libraries from the whole of South Yorkshire. Based on Sheffield Public Library, its activities include the maintenance of a union

catalogue of periodicals. The Standing Conference of National and University Libraries (SCONUL) and the Standing Conference of Librarians of the Libraries of the University of London (SCOLLUL) perform similar functions. Such action ensures that at least one set of each periodical will be preserved and made accessible to the other participating members, and that one or other will find that it is in their interests to extend a run, or subscribe to a periodical which at present is not being taken by any of the others.

In planning acquisition policies it should also be borne in mind that no library, particularly those serving the scientist, can ever be restricted to a 'special' subject since the information needs are so varied and articles on any one subject are distributed in periodicals not primarily covering that subject. To complete coverage it is necessary that libraries should exchange information on the periodicals which they themselves are not acquiring, but which may interest the others. The generality of so many periodicals and the overlapping of borderline interests of apparently widely divergent subjects can only be overcome by co-operative acquisition.

In actual practice co-operative acquisition is largely governed by the realization that no library can be expected to have available for loan its only set of a periodical which is in constant use; there must be duplication of the more recent volumes of widely used periodicals. Financial provisions may make this impossible in some cases, but it is possible in regional groups to allow access to the required periodical.

Before ordering a new title it is necessary to consult the union catalogues (see Appendix IV) available and similar aids to determine whether the library is justified in taking it. There is no list of periodicals available in British libraries arranged under subject headings. The various union catalogues available, including those in card form at the National Central Library and other centres, are designed to facilitate interlibrary loans, and at present serve no other purpose. Another decision to be made when adding a new title is whether it is important to the collection to warrant filling the set from Vol. 1 (see p. 10).

A good instance of co-operation in periodical acquisition is given by Miss Beatrice V. Simon, who in an article (25) states

that: 'In London, just before the war, the librarians of four medical libraries within walking distance of one another sat down and analysed their collections and agreed on the fields in which each would concentrate and build up complete sets. During the blitz they knew just what to evacuate, so that between them they could maintain complete coverage of their subjects.'

The British Library of Political and Economic Science also engages in extensive co-operation, particularly in the fields of acquisition with other special libraries, such as the Institute of Advanced Legal Studies, the Royal Institute of International Affairs, the School of Slavonic Studies, and the School of Oriental and African Studies.

2.31 Acquisition of foreign material

Another recommendation of the Royal Society Scientific Information Conference was the following:

'10.2. *Procurement of rare foreign periodicals.*—The Royal Society is invited to consider means of facilitating the receipt, location and availability in this country of foreign, particularly Eastern European, literature.'

It is in the field of foreign acquisitions that co-operation among libraries is most urgently needed, and in 1948 a committee of the University and Research Section of the Library Association invited Dr Marjorie Plant, of the British Library of Political and Economic Science, to make a general survey of the position of the supply of foreign books and periodicals to the libraries of this country. The survey was made under the auspices of the Rockefeller Foundation, who also generously offered financial support. Those librarians who wish to acquire foreign material would be well advised to read the general conclusions drawn from this survey which were published early in 1949 (26).

In an appendix to the Report, Dr Plant has listed the addresses of a considerable number of foreign publishing houses who issue catalogues or prospectuses, while in Appendix III of this book will be found a selection of booksellers in this country who specialize in foreign publications. In 1963 the American Library Association published a directory of 187 booksellers in all parts of the world who supply serials and

government documents other than United States material to ninety-four unnamed libraries in the United States (27). The directory, entitled *International subscription agents*, is in alphabetical order of agents' names and there is an index by countries. The larger agents will be useful to the small library, the little ones to the larger library. Some are truly international in that they supply material from a great many countries to institutions all over the world, whilst the internationality of others is limited to supplying the serials of their own country to a few libraries outside it. For catalogues of government serial publications enquiries should normally be addressed to the government printer in the capital of the country concerned.

In the Aslib survey of fifty-two information/library units in industrial and commercial organizations (28), it was revealed that only one periodical in twelve was in a foreign language. The number of organizations (out of fifty-two) which took at least one periodical from one or more of the twenty-three countries overseas is given in the following table:

Organizations	*Country*	*Organizations*	*Country*
52	U.S.A.	12	Rest of Europe
14	U.S.S.R.	5	Israel
40	France	5	Turkey and Arab Asia
42	Germany and Austria	22	India and Pakistan
27	Italy	21	Japan
33	Benelux countries	8	Rest of Asia
26	Scandinavia and Finland	16	Union of S. Africa and Central African Federation
12	Spain and Portugal		
28	Switzerland		
6	Eire	11	Rest of Africa
11	Czechoslovakia	30	Canada
7	Jugoslavia	14	Latin America
		28	Australasia

A few important foreign periodicals, notably from the Benelux countries, Scandinavia and Switzerland, are available in English, so that the figures for those countries are probably higher than they would otherwise have been. Six organizations which took no foreign language periodicals took some abstracting journals. Assuming that the abstracting journals taken covered foreign as well as English literature, it appears that all fifty-two organizations had provided themselves with some means of following at least some foreign work.

A major defect of the Farmington Plan (an experiment in specialization by voluntary agreement among American research libraries to ensure that at least one copy of each new foreign book and pamphlet likely to interest a research worker in the United States will be acquired by an American library) is its avoidance of periodicals so far; these will, however, be considered when the new edition of the *Union list of serials* is completed and up-to-date information is therefore available on resources already available.

British librarians are in the fortunate position of being able to build on the *British Union catalogue of periodicals* and the *World list of scientific periodicals*. The fourth edition of the *World list* is published in three volumes and covers over 60,000 scientific, technical and medical periodicals published between 1900 and 1960. Prior to its publication, notes of additions and amendments to the third edition were prepared by the Documentation Committee of the Society of Chemical Industry and have been published at intervals in *Chemistry and industry* and made available as off-prints. The Standing Conference of National and University Libraries (SCONUL) commenced publication in November 1956 of a regular *Foreign periodicals bulletin* which lists titles available for loan and are not already listed in BUCOP or the *World list*. Any national schemes for dividing responsibility for the acquisition of foreign periodicals are to be welcomed. The National Lending Library for Science and Technology will remove the need to deal with scientific periodicals, but there still remains the considerable problem of the humanities. A British equivalent to the Farmington Plan should be devised so that Great Britain could become nationally self-sufficient for modern foreign periodicals. The National Central Library has announced that it will assume greater responsibility for foreign periodicals—bearing in mind that the new Lending Library will cover its appointed fields exhaustively—and will seek to provide an information service on new periodicals (29).

2.4 Ordering

Periodicals order work may be divided into the following three categories:

(1) New periodicals, first order.

(2) Renewals.
(3) Back number and back volume orders.

As stated on p. 5, orders for periodicals are usually placed with booksellers or agents, with the exception of direct subscriptions, which are those orders placed with the publishers.

Regular subscriptions should not be placed for periodicals the library does not expect to continue or which are too new for their value to be determined. It is cheaper to purchase several successive sample copies first. It is also unwise to rely on being able to borrow these initial numbers from other libraries and then, after making a decision, to place an order for the periodical, to discover that the initial printing has been exhausted!

When starting a new subscription, the letter to the agent may read 'Please enter the following subscription to begin with . . .' or 'Please add to our subscription list the under-mentioned periodical, to be renewed until further notice'. The publisher should be quoted when giving the title, in order to avoid confusion over possible duplicate titles.

Some time before the subscriptions expire, the agent should send a list of titles to the library for confirmation and in order that the librarian may specify any additions or omissions to be made for the following year. Some libraries submit a fresh list each year to the agent, but in either case it is desirable to have all subscriptions end at the same time—either the end of the library's fiscal year or the close of the calendar year.

The agent's bill for renewal of all the titles he handles for the library must be checked against the order or record cards, noting on each card the date of renewal, expiration date of renewed subscription, the agent's name, cost and volume number. It must also be assured that the periodical is being currently received.

Direct subscriptions are usually re-ordered annually. If direct subscriptions are kept as few as possible, a great deal of record work and correspondence on the part of the library will be eliminated. Only when especially favourable library rates are granted for direct orders should such an arrangement be entered into.

Back number and back volume orders are discussed later.

Some libraries maintain a separate order and payments file; others incorporate them into a visible card unit combined with the accession record. Visible indexes and their uses will be discussed later.

For those libraries who cannot afford a visible index or who find it more convenient to maintain a separate order and payments file on vertical cards, the information the cards should carry is tabulated below:

(1) Title.
(2) Volume.
(3) Year or dates covered.
(4) Date of invoice.
(5) Publisher and address.
(6) Cost.
(7) Source (agent).
(8) Number of copies.
(9) Disposition, or call number.

There is no standard card available and the layout of the required information is usually a matter of individual choice. Any good card used for book orders may be adapted for the ordering of back numbers, volumes and sets of periodicals.

The form of entry of the title on the cards is dealt with in Chapter VII.

2.5 Agents

If the library subscribes to a dozen or more periodicals, it is desirable that the orders for them should be placed with agents or booksellers; to order or renew each subscription with each publisher entails too great a strain on the library staff. An additional advantage in employing the services of an agent is the guarantee that the library will receive every number issued, as well as the necessary title pages and indexes, although the latter must often be specifically requested in the first order.

Julian Blackwell, speaking on the problems of bookselling, put the case as follows: 'I will just point out the advantages which are, surprisingly, not very widely known, of getting your periodicals through a subscription agent rather than direct from the publishers. This, of course, excludes newspapers, etc.

which are almost always better obtained at your local newsagent.

1. The chief advantage of having an agent is the saving of time and labour. You tell the agent what you want and he does all the donkey work.
2. The agent knows the manifold peculiarities of the publishers. Some will only take subscriptions by the calendar year, some by the volume, some by the current number and others have a waiting list. Some have a controlled circulation and some insist on cash with order. With one publisher there is always a two-month delay, and after the order has been received we get an acknowledgement slip with a reference number saying that the subscription has been entered, but not when; and so we must write back and ask them, in order to keep our records accurate.
3. The agent will deal with foreign currency difficulties, and many foreign publishers give much better service if orders come through well-known agents. This, of course, helps us to cut down the delay in starting new subscriptions.
4. The agent is responsible for the efficient handling of renewals, to ensure continuity, and will look after claims.
5. The agent will provide information on new and obscure periodicals and will, of course, supply price quotations, subject lists, and catalogues. Most agents maintain an extensive collection of reference books covering periodicals.
6. You can pay for all your subscriptions with one bill once a year at any time of the year you wish.
7. The agent will prevent the clash of customer's special ordering and invoicing instructions with the publisher's own invoicing and ordering systems.

Publishers allow agents a small discount and on this discount they provide all these services. In most cases the price of periodicals is the same whether you order them direct from the publishers or, through an agent. Exceptions to this are some American and foreign journals on which agents put a small surcharge, and publications of some societies on which agents receive no discount and therefore must add a small handling charge. As this surcharge varies from agent to agent it is best to check around before you choose your agent' (30).

The main factors which influence the choice of an agent are the efficiency of service and the terms of discount. In Appendix III there is a selection of agents and booksellers who specialize in periodical literature, including foreign publications. Mention has already been made of the American Library Association's directory of international subscription agents (see p. 23).

If at all possible it is wise to concentrate on one agency. Librarians should also bear in mind some of the difficulties of the agents, who are frequently blamed for difficulties that are the publishers'. No agency can guarantee the price of a publication in these days, and their position as liaison between the library and the publisher is not an enviable one. Due to the rising costs of printing, they are also faced with the prospect of narrowing profits. Every librarian should carefully check the details of all periodicals ordered, particularly publisher, frequency and price as far as possible. All claims for missing numbers should be as prompt as possible as the supply may be exhausted before the agent can act.

2.6 Unesco book coupons

In order to facilitate the acquisition of publications from other countries, Unesco has inaugurated the Unesco Book Coupon. In principle, the book coupons are intended to serve the needs of both institutions and individuals. Since Unesco is, however, obliged to limit the amount of coupons allotted to each country, the distributing body in each participating country may often have to make the allocation of coupons on a priority basis, whereby the needs of educational, scientific and cultural institutions which serve a large or particularly important group receive first priority.

These book coupons can be used for subscriptions to periodicals, to buy individual volumes or issues of periodicals, photocopies and microfilm copies, and for the payment of membership subscriptions to learned societies, provided that such subscriptions are mainly a means of obtaining the publications of the learned society in question. They cannot be used to buy daily newspapers, however.

In order to obtain a publication from a participating country all the librarian need do is to purchase, with sterling, from the United Kingdom distributive centre, coupons to the value re-

quired and send them, either direct or through his usual bookseller, to an agency in the country concerned, together with an order for the publication required. The agency will post the publication direct to the purchaser or to his bookseller. If the exact value of the publication is not known, enquiry may be made beforehand to the agency in the country concerned. The coupons have a dollar face-value, and are available in the following denominations: 25 cents, $1.00, $3.00 and $10.00. The smallest denomination was specially designed to enable purchasers to pay for single issues of periodicals, reprints, etc., payment for which is difficult under present currency regulations in some countries. In addition to the face-value of the coupon, the purchaser pays a small surcharge to cover the expenses of the scheme. The period of validity of a coupon is ten months.

The address of the United Kingdom distribution centre is:

Unesco Book Coupons,
United Nations Association,
25 Charles Street,
London, W.1.

Orders for coupons and requests for further information should be sent to them.

Since the number of participating countries increases continuously, a special leaflet is published by Unesco to give the most up-to-date information on countries which have joined the scheme.

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CHAPTER III

ACCESSION AND OTHER RECORDS

3.1 Basic records

It is generally accepted that four basic records of periodicals should be kept:

(i) holdings
(ii) current receipts
(iii) payments
(iv) binding

There is also a virtual unanimity of opinion that these records are best kept together in small libraries; there is no need for duplication. In the Aslib survey it is stated that nearly half of the information/library units kept records about purchases of periodicals, supplies, payments, exchange arrangements, etc. on the forms recording receipts (1). For this, combined visible card indexes are almost universally approved. The advantages of having a record which provides a historical sketch of each title from the time of the first payment to the state of a bound volume should not need explanation. It must be admitted, however, that this may only be possible for the smaller library. Edgar G. Simpkins, in a study of serials processing, states: '. . . one objection to a one-record serials catalogue might be its size, especially in the case of large libraries. The size of the Kardex should be reduced by removing the dead, complete titles and maintaining a vertical file from them adjacent to the Kardex. It would be a question of balancing convenience against cost . . .' (2) Miss R. M. Jacobs, in a study on the problem of periodical records (3), argues that '. . . since records may be permanent, semi-permanent, or transitory, any natural groupings which may exist must first be discovered. It is from this angle that an analysis is logically made. Of the records . . . only circulation, loan and binding are ephemeral; the rest are permanent. The permanent group, however, may be subdivided into those records which may, on the whole, be permanently established when the title is first acquired and those

which are gradually built up. In the first group, the static group, are source, housing—including form of bindings used—and disposal. The growing, fluid group usually consists of records of annual ordering, payment, receipt and volumes bound. Once all the fluid records for a given volume are complete, they may be incorporated in a static statement such as the well-known "Library has". But while accumulating it is essential that a definite distinction be made between "static" and "fluid" data.'

This theory was advanced to discover the relationships among periodical records in order to facilitate the proper grouping of forms in a combined visible index, but it may be applied equally to the arrangement of cards in a vertical file. Some libraries prefer to maintain separate records of receipt, loans, payments, binding, etc., on the traditional vertical card, and in each separate record will be found information about the same journal. Miss Jacobs, in her article, maintains that this is a result of the tradition that library records are developed around an action and a custodial tradition. She suggests a mental reorientation from routine to application by the adoption of the combined visible record and argues that such a unification of data is economic in every respect.

D. J. Campbell has described developments in the libraries of the Royal Cancer Hospital that have followed lines rather similar to those described by Miss Jacobs. In an article he states, 'The principal difference between our approach and that of Miss Jacobs was that we did not consider it possible to combine all records for periodicals in one system nor did we consider this of great importance, provided that the records were as few as possible, kept in easily usable form and close together. The loan records in particular are far too voluminous to permit unification; nor can the binding record, consisting of details of successive consignments with dates of collection and return, instructions, prices and comments, be combined with our main periodical control.

'Apart, however, from these records . . . all essential records for each of the 350 periodicals and serials held are in one system. The original idea was to give to library users a far more exact and easily usable record of periodical holdings than is usually available to them. In many libraries the only public

record of the holding of a periodical is an entry, prepared on traditional lines, in the general catalogue. This gives only the first volume in the set and its year, and any major gaps. It may not reveal minor gaps, changes in frequency or character, the volume or volumes and parts published in the current year, or the number of volumes per year; it does not indicate the last part received, nor where it is, the last index received; nor when the next number or index may be expected, nor does it give the bibliographical details of a full set, if the library set is incomplete' (4).

Mr Simpkins' article describes current practices at the Linda Hall Library of Science and Technology, Missouri, which has over 10,000 serial titles in its files and of these over 3,000 titles are being currently received. This is not an inconsiderable number. The author claims, however, that 'The serials catalog, located in the periodical reading room, provides complete record control for the entire serial holdings by containing all of the information necessary for their acquisition, treatment and use. It, thus, has eliminated the need for any other records, other than a short entry subject file and correspondence records' (5).

It is obviously impossible to lay down any hard and fast rules. The lack of a standard procedure is not, in itself, a matter of concern. Circumstances vary from library to library. Decisions on what records should be kept must be left to the individual librarian, who must necessarily be influenced by his budget and the staff available. Any temptation to maintain a record which is not absolutely necessary should, however, be ruthlessly suppressed.

Opponents of the combined visible index entry argue that the accessions record should be confined to current intake; it should not be a complete record of living, dead and discarded periodicals. Such comprehensive information is usually recorded in the general catalogue. The difficulty, too, of deciding what is a periodical and consequently the necessity of making references in the catalogue of monographs to the register-catalogue of periodicals and vice versa is also a disadvantage. The usual compromise is to catalogue the periodicals collection in full on traditional lines on 5 in. × 3 in. cards in the main catalogue. This complete record of holdings is supplemented

by combined visible index entries for receipt, payments and circulation. Binding records are often kept separately on vertical cards. For quick reference a strip index of holdings and locations is kept in the reading room. This diversity of practice is the result of each library having to supply its own answers to its own specific problems. Wherever possible, however, the duplication of records should be kept to a minimum.

3.11 Equipment

The equipment to house these records may be one of four types:

(1) On sheets, usually in loose-leaf registers.
(2) On vertical cards, in the conventional card drawer.
(3) On cards in a visible arrangement in shallow trays.
(4) On the wheel principle, with the cards mounted on a circular drum.

3.12 Loose-leaf registers

Particulars of these loose-leaf periodical registers containing a whole page for each journal may be found in the catalogues of Libraco, Ltd, and other library suppliers. This method is not very popular, however, and most libraries have abandoned it.

3.13 Vertical cards

The method of using the common catalogue drawer is familiar to most librarians. One of the chief disadvantages of this method is that to use cards which must be taken from a drawer to make an entry and then re-filed takes up more time than the use of those which can be written up without being removed. In the vertical file the edges of the cards are exposed and get dirty after a time, and the life of each card is necessarily more limited than those which are protected by the pockets and transparent strips used in the visible record. The use of metal signals attached to the tops of the vertical cards is also inclined to lessen their longevity. These disadvantages, however, must be weighed against the advantages of (*a*) cheapness, (*b*) the saving of space, and (*c*) the use of materials and equipment already in the library.

3.14 Visible records

The most popular visible checking record cabinet is metal, and is fitted with shallow metal trays, each equipped with index labels. There is a variety of models, but basically they are the same with some modifications inside the cabinet. The most popular is the type where the cards are held in paper pockets with a transparent strip at the lower edge into which the bottom edge of the card, on which the title of the periodical is usually typed, may be inserted. An alternative is the hinge or hanger-type, where the cards themselves are suspended from rods or clips. The advantage of this type is that many more cards will fit into a tray as the heavy pockets are eliminated, but the edges of the card are usually exposed and get dirty, lacking the transparent cover.

The cabinets are built in several sizes, but those to accommodate 6 in. × 4 in. or 8 in. × 5 in. cards are more commonly used. The cabinets may be interlocked to make a stack or battery of units, and the whole installation is mounted on a metal base filled with extension tray rests.

For the small library receiving less than 200 titles a book unit has been designed, consisting of a metal folder, carrying two panels of cards. The cost is little more than that of a small vertical card cabinet.

Typical equipment is illustrated by illustrations 1–4.

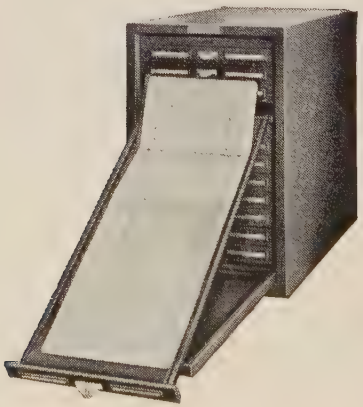

Illustration 1.—
Typical visible index

Illustration 2.—
Book type holding about 100 entries

(*Illustrations* 1 *and* 2 *by courtesy of Art Metal Co.*)

Illustration 3.—Pocket on wire hinge. Knobs fit into slots in drawer sides

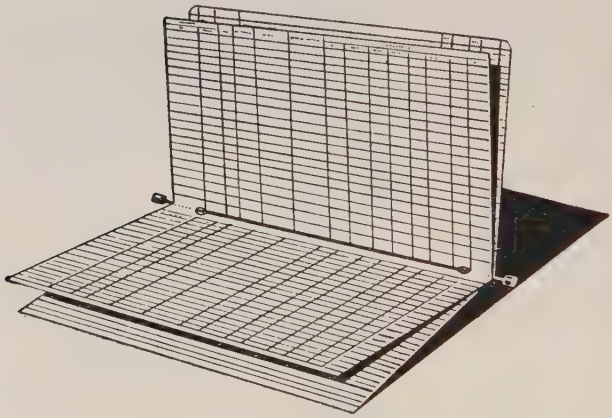

Illustration 4.—Multiple, four-page card unit
(*Illustrations* 3 *and* 4 *by courtesy of Art Metal Co.*)

The large cabinets cost considerably more than a vertical card cabinet, however, and consequently the librarian naturally expects some distinct advantages. These advantages are:

(1) speed,
(2) cleanliness,
(3) combination of records,
(4) use of coloured signals.

It is hardly necessary to emphasize speed and cleanliness, but the advantages of a record which contains, apart from the basic items of title, year, volume, space for checking current numbers, publisher, title page, index and source, information regarding holdings, bills, location, binding, circulation or loans, impossible on a single vertical card, are important in libraries of all sizes. This combination of records may be accomplished by some judicious thinking when designing the form the record cards will take. These cards, and their design, will be discussed later.

The other advantage of the visible file, and perhaps the most popular, lies in the way it lends itself to follow-up methods by the use of coloured signals. These signals can be used to indicate

whether the latest issue of a journal has come in, or if a new copy of a missing number has been claimed, etc.

Apart from the cost, a disadvantage of the visible record is that it is less economical of space.

A book system has been devised by Kalamazoo, Ltd, who manufacture a range of visible records. The books (or binders) are made of rubber and plastic composition and fitted with a locking device. Each binder contains a number of dividers with index tabs on to which loose-leaf visible slips are placed in an overlapping sequence. The slips have a visible edge for the periodical title. Each binder, of foolscap size, can accommodate about one thousand entries. They are easy to consult and can be placed on a desk for easy working; both sides of the sheets can be used and entries made without removal.

George N. Hartje (6) gives the following description of a piece of visible record equipment placed on the market in the United States by Remington-Rand:

'Remington calls it a *Robot-Kardex* and bills it as a "fundamental step in record keeping efficiency". To it are attributed all the advantages of a Kardex visible system plus the new advantages of a mechanized desk. The Robot-Kardex unit contains sixty slides in two banks of thirty slides each, which move up and down on a runner. By selecting a slide on the indexed keys and pressing down on the left and right end of the key the desired slide comes out on the desk extension rack. Repeating this operation returns the slide and brings a newly selected slide to the desk top. All in an average of three seconds. If one wishes to return the slide without bringing out another, a light touch of the key does the trick. Only one slide is available on the desk extension at any one time; but any number of slides may easily be removed for use elsewhere and the machine will continue to operate automatically so long as neither bank contains over three more slides than the other.

'The cabinet is approximately 26 in. wide, 64 in. high, and 54 in. deep. 26 in. of the depth consists of a desk extension at which the operator sits. This extension is about 32 in. high. The unit requires an area of 13·4 sq. ft and holds 4,020 5 in. × 8 in. cards, which are visibly indexed. The unit is motor-driven, with hand-operated controls for use in emergencies. It should be noted that the 13·4 sq. ft figure for floor space includes the

operator's chair. The price is $1,875, and there is a possibility of a 10 per cent. excise tax.

'This [Robot-Kardex] appears to be the file clerks' Utopia. At first glance the price seems to be the chief drawback, but one must remember that in the long run it is not always the most economical to purchase the cheapest equipment. These units are so new that at the present time there are no satisfactory operational reports, but it would behove a library installing new record filing equipment to investigate the Robot-Kardex.'

3.15 'Wheel' type records

This type of index is suitable for large collections. The cards are mounted on a circular drum and are available in many styles and models (illustration 5), ranging from small desk models to a floor model which can be operated either mechanically or electrically. The floor model has a capacity up to 8,000 cards per unit and occupies less than 4 sq. ft of floor space. Further units can easily be arranged in batteries to be handled by one person and these models are mobile, being mounted on wheels. If necessary, a whole segment of the wheel can be removed for use away from the file. The cards themselves are easily removed by a jerk of the hand, as they are notched at the bottom edge. The cards are at desk height, and if the file is not crowded to capacity can be marked *in situ*. The file is not visible, but tags can be attached to either side or the top of the card for signal purposes. The advantages of this type of equipment are:

(1) extra large capacity,
(2) rapid marking,
(3) easy additions,
(4) lower cost than visible records,
(5) less floor space,
(6) natural desk height,
(7) no drawers to open or close,
(8) portability.

However, the records are not visible, and due to wear and tear on the notched edges the cards may tend to slip free from the wheel. The constant motion may also displace the tagged signals. Whether or not the other features outweigh these

Illustration 5.—Some typical 'Cardwheel' units
(By courtesy of C. W. Cave & Co.)

disadvantages is a matter of opinion, particularly if viewed from the angle of time and motion study.

Manufacturers of this type of equipment include the following:

C. W. Cave & Co., Ltd,
59 Holborn Viaduct, London, E.C.1.
Trade name of equipment: 'Cardwheel'.

E. N. Mason & Sons, Ltd,
Arclight Works, Colchester, Essex.
Trade name of equipment: 'Cardineer'.

Rotadex Systems, Ltd,
656 Chester Road, Birmingham 23.
Trade name of equipment: 'Rotadex'.

When choosing equipment, however, the essential virtues must be compactness, flexibility and simplicity. In the article already quoted (p. 39), the following useful table relating to equipment for 5 in. × 8 in. cards was included.

A column quoting the American prices has been omitted.

EQUIPMENT FOR 5 in. × 8 in. CARDS

Housing	*Area (sq. ft)*	*Capacity*	*Cards per sq. ft*	*Trays per unit*	*Cards per tray*	*Visible*
'Acme'	1·7	1,157	680	13	89	Yes
'Kardex'	1·7	1,224	720	17	72	Yes
'Robot-Kardex'	13·4*	4,020	300*	60	67	Yes
'Cardineer'	4·0	6,000	1,500	—	—	No

* The area includes working space for the operator's chair.

3.2 Record cards

In the special library field no standard periodical record cards have been devised that would meet the requirements of every organization. The first step, however, regardless of what form the index takes, must be to decide what records are to be kept of each periodical. As stated at the beginning of this chapter, it is generally recognized that the four basic records should include: (1) holdings, (2) current receipts (including source and method of acquisition), (3) payments, (4) binding.

Decisions on what records should be kept, however, must be left to the individual librarian, who must necessarily be influenced by his budget and the staff available. For instance, the policy of his library may also preclude the loan or circulation of journals, apart from being unable to afford to bind them! This immediately absolves him from maintaining records of loan, circulation and binding, yet on the other hand he may require some indication of the subject of the periodical or the language in which it is written. Any temptation to maintain a record which is not absolutely necessary should, however, be ruthlessly suppressed.

Miss R. M. Jacobs, in a recent study on the problem of periodical records (7), argues that '. . . . since records may be permanent, semi-permanent, or transitory, any natural groupings which may exist must first be discovered. It is from this angle that an analysis is logically made. Of the records . . . only circulation, loan, and binding are ephemeral; the rest are permanent. The permanent group, however, may be subdivided into those records which may, on the whole, be permanently established when the title is first acquired and those which are gradually built up. In the first group, the static group, are source, housing—including form of binding used—and disposal. The growing, fluid group usually consists of records of annual ordering, payment, receipt and volumes bound. Once all the fluid records for a given volume are complete, they may be incorporated in a static statement such as the well-known "Library has". But while accumulating it is essential that a definite distinction be made between "static" and "fluid" data.'

This theory was advanced to discover the relationships among periodical records in order to facilitate the proper grouping of forms in a combined visible index, but it may be applied equally to the arrangement of the cards in a vertical file. Some librarians prefer to maintain separate records of receipt, loans, payments, binding, etc., on the traditional vertical card, and in each separate record will be found information about the same journal. Miss Jacobs, in her article, maintains that this is a result of the tradition that library records are developed around an action and a custodial tradition. She suggests a mental reorientation from routine to application by the adoption of the combined visible record and justifiably

argues that such a unification of data is economic in every aspect. Despite the fact that the book type of visible index is available for the smaller library, there are some who cannot afford even this and have to rely on the traditional card catalogue. It is only fair, therefore, to indicate some possible methods for them to follow.

3.21 Vertical cards

In the vertical file, it is claimed that no card is large enough to record satisfactorily receipt, binding, ordering, etc , without confusing the records. The standard sizes of vertical cards are 5 in. × 3 in., 6 in. × 4 in. and 5 in. × 8 in. The usual size for vertical periodical records is 6 in. × 4 in., though where a certain combination of records is feasible it is advisable to use the larger size.

By making use of both sides of a card it is possible to combine certain records, whilst the use of coloured cards is also of great assistance. One use of coloured cards is to indicate source, such as white for subscription, pink for exchanges, blue for gifts, etc. They may also be used to indicate frequency of publication, with different colours for monthlies, weeklies, dailies, etc. Even if all this information is indicated on the card itself, the use of different colours greatly facilitates their reading. Those libraries which cannot afford cards of a different colour may easily colour the upper edge of a white card by placing it on a wad of blotting paper and drawing a swab of coloured ink or dye across it, using a ruler to preserve a straight line. This practice is, of course, time-consuming. An alternative is the use of coloured clips or tabs. Apart from the indications already mentioned, coloured cards or tabs may also be used to indicate the language in which a journal may be published or the subject with which it deals.

It is usual for the obverse side of the card to be used for the permanent record, i.e. title, title page and index information, disposition or call number, frequency, and spaces or 'boxes' for checking in receipts, varying according to frequency. There may not be room to include the other permanent records, such as publisher and source of supply, and consequently it may prove more convenient to place them on the reverse side of the card with the subscription payments, etc. On either side of

the card may be placed a space for 'Remarks' or 'Notes', which may be used to record missing numbers or other pertinent data. A good example of this type of card is the Kaiser periodical record card, which is 6 in. × 4 in. and records several years' holdings (illustration 6).

For those who prefer to design their own forms, however, Miss Jacobs gives the following advice (8):

'A form is no more than a pattern followed, a way of putting things down. The standard catalogue card is a well-designed form. Important items are placed first, and to the top and left, the natural beginning point for the reading eye. Spaces between items are neither too large nor too small for ease in consultation. Distinct important information, such as the call number, is placed by itself where it will be seen easily. If printed, less important information is not only towards the bottom of the card, but in smaller type. . . . Data should be inserted to read from left to right, not up and down. Spaces between items must be distinct; heavy and light lines help to divide spaces. Important information must stand out, and should not get tangled up with unimportant notes. Data alike in degree or kind must be grouped.'

In connection with the design and use of different forms of frequency, J. H. Gable, in his manual (8), makes the following suggestions:

'*Monthlies.* The checking space for this type of card, used for semi-monthly, fortnightly, bimonthly, quarterly, semi-annual, and irregular publications which publish oftener than once a year and are dated in definite months, should include these columns: Year, Series, Vol., Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec., Tpi (title page and index). In checking, the number may be placed at the top of the space, and the data on which the number is received indicated below it. If there are several volumes during the year, all volume numbers may be placed in the column headed "Vol.". The space "Tpi" may be used to record the date on which the title page and index are received, or simply the volume number, indicating that they have been received for a particular volume.

'*Weeklies.* In checking weeklies, the number and the date of publication should be set down. It is more important to indicate the publication date than the date of receipt, partly because

(a) For a Weekly Journal (W)

Title of Periodical W

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Index
1961	2 16 23 30	6 13 20 27	5 12 19 26	2 9 30 16 23									Jan-Jun Jul-Dec Loose
1962													
1963													

REMARKS :—

(b) For a Monthly Journal (M)

Title of Periodical M

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Index
1962	1	1	1	1	1	1	1	1	1	1	1	1	Loose
1963													

REMARKS :—

Illustration 6.—Kaiser periodical record card (vertical)

(c) Reverse of both Monthly and Weekly Cards

Publisher's name and address.

Suppliers (Agents or Publishers), with date of first order.

Period	Paid to	Date	Period	Paid to	Date
Jan.-Dec. 1963	(Supplier's Name)	23.11.63			

Illustration 6.—Kaiser periodical record card (vertical)

the latter can be readily ascertained, as weeklies almost invariably appear the same day each week, and partly because the user of the checking record, in the case of weeklies, is usually looking for numbers for certain dates. By recording only the number of issue, semi-weeklies may also be checked on the weekly cards, though publications coming oftener than twice a week should be checked on the daily forms. . . .

'*Dailies.* This form requires space for each date in the month, and can be used for one year only, though a few libraries, using larger cards, check two years on a single card.

'*Irregulars and annuals.* Irregular publications are simply those not issued at regular intervals. If these appear oftener than once a year, and are *dated in definite months*, the monthly form may be used. If issued less or more often than once a year, but dated simply with the year, a special form may be

used. Annuals may be checked on cards which provide space for many years.

On the question as to whether it is better to indicate the receipt of a title by the date of publication or receipt, as well as by volume and number, it can be argued that an issue is overdue when the date of publication has passed. It may, therefore, prove more practical to enter current issues by date of receipt as well as by volume and number. In these uncertain times there is always a sufficient number of periodicals which do not appear on time to make the last date of receipt a basis for a claim or follow-up, rather than the official date of publication, which can be checked by the volume or number.

One method of overcoming this problem is to file the cards for dailies, weeklies and monthlies separately in sections with partitions in them. As the periodicals are entered the cards can be re-filed behind their respective partitions. At the end of the period those still in front of the partition can be noted and the missing numbers claimed.

Details of binding, circulation and loans (which are dealt with in other chapters) are kept separately, according to the volume of the work and the ideas of the library concerned.

3.22 Visible record cards

The forms used in visible records are much more intricate than the conventional types which have just been described. Cards are used, but apart from the fact that it is also possible to use both sides for record keeping, a judicious use of the pockets, hinges or hangers used in the visible record can result in a greater flexibility. Pockets are usually slotted to allow the insertion of cards on both sides, or even smaller cards side by side. In the hinge or hanger-type it is possible to use four-page folded cards with almost double the writing space available on single cards. In both types it is possible to use auxiliary rider sheets or flimsies, which can be hung over the master card and replaced or supplemented by others as the need arises (see illustration 4).

Signals, of coloured plastic, can be fixed to the lower or working edge of the main card which is visible. They are of two types, either small clips measuring $\frac{1}{4}$ in. $\times$ 1 in. and used in a vertical position for static notings, or the 'telescopic' types,

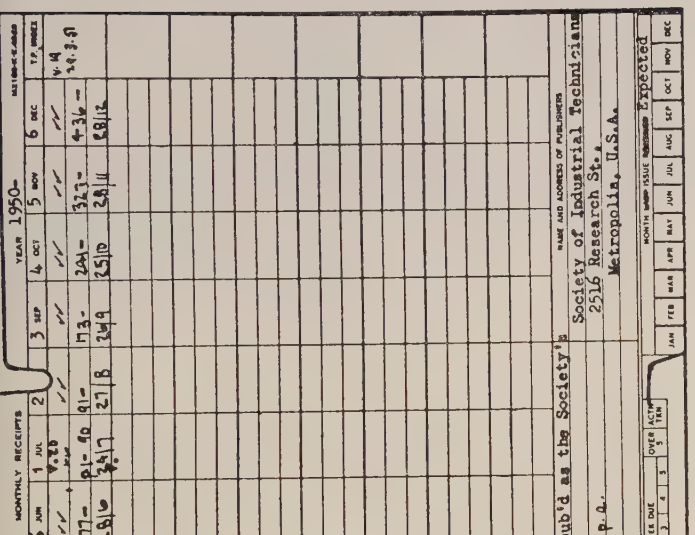

Illustration 7.—Main card in visible record (monthly)
(*By courtesy of Miss Ruth Jacobs*)

several inches long, which slide horizontally along the bottom of the card. The use of these signals will be discussed later.

The suppliers of visible index equipment can usually advise on the design of the forms to be used. It must be remembered, however, that the size of the form will be determined by the size of the cabinet ordered, and that the bottom edge of the main, or master, card is the working or visible edge and must be reserved for the title and all actions denoted by the signals.

The main card, then, is the most important and should contain most of the information of permanent value (see p. 49), whilst the working edge should be capable of presenting at a glance the current position of each title.

It is usual for the *main* card to take the following form (see illustration 7):

(1) Visible edge.
(2) Square for action signals.
(3) Space for notes and data, i.e. frequency, source, price, addresses, and miscellaneous information.
(4) Squares or 'boxes' for checking in receipts.
(5) Repeat of title on the upper edge of the card for filing vertically when removed from the visible record.
(6) Shelf-mark.
(7) Square for entering title page and index information, usually on right-hand side of card.

The *auxiliary* cards, or riders, housed either in the pockets or hung over the main card, can indicate (see illustration 4):

(8) Disposal or circulation instructions.
(9) Binding or boxing instructions.
(10) Payments.
(11) Circulation.
(12) Loans.

This information varies according to the practice of the individual library or organization.

The signals, which have been described, may be slipped under the celluloid edge of the pocket type, or clipped over the bottom of the card in other types. This, of course, is the visible edge which holds the squares representing the months or weeks of the year, according to frequency. As each issue is received, the

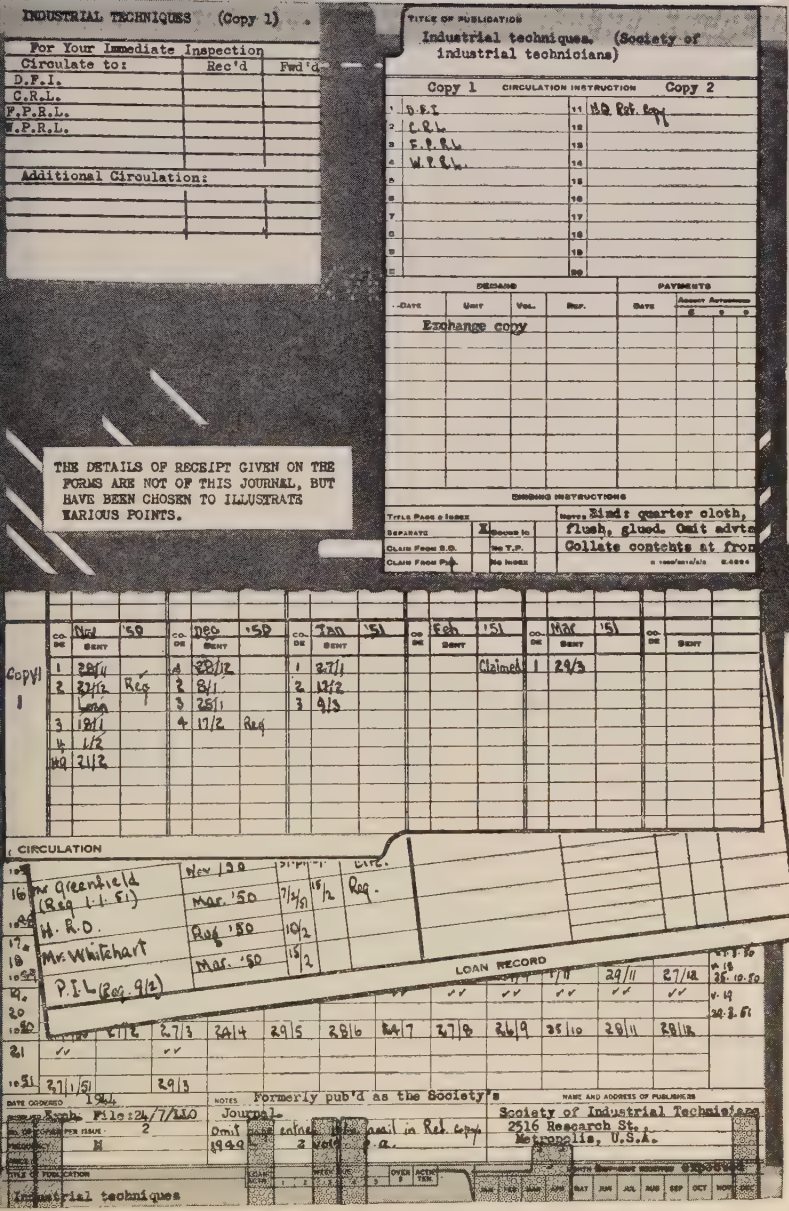

Illustration 8.—Composite record in visible index
(*By courtesy of Miss Ruth Jacobs*)

signals can be moved along to cover the appropriate square. This may be either the month of receipt or month of issue. This places the signals in a row down the face of a tray of cards *if* all the titles have been received. The signals will be out of line for all titles not received and thus greatly facilitates the reading or checking of the trays. If the cards are not grouped according to frequency, it is obviously desirable to use different coloured signals for each frequency in order to avoid confusion. Since an average tray holds only sixty to seventy cards, the person responsible for checking in the periodicals may obviate any complete reading of the trays by training himself to check only those cards whose signals are out of line.

Cards for irregular publications, or those known to arrive habitually late, may be given specially coloured cards or signals so that they may either be omitted during checking, or read as a special section at a time.

Squares can also be provided on the visible edge for the use of signals to indicate outstanding loans (illustration 8). If necessary, further signals of different colours may be added to indicate either language or subject.

It is this signal edge, then, that really gives this type of record the generic 'visible', giving as it should a great deal of information in one glance. It is really the key to the success of the working of the whole record. For more detailed information than has been given here, the reader must be referred to the article by Miss Jacobs (p. 43).

3.23 'Wheel' type cards

Cards for this type of index can follow the design of either the vertical or the master card of the visible type. Both sides of the cards may be used. If desired, existing cards can be transferred to the wheel by means of a punch, provided they are of a standard size.

3.3 Magnetic indicator board

J. E. L. Farradane (10) has suggested that 'a comprehensive card index is suitable for use only by the library staff and not by readers to whom the *variable* information is, however, frequently valuable. Such readers require a system with easy inspection for ascertaining all types of current details. None

Illustration 9.— Magnetic indicator board
(By courtesy of Mr J. E. L. Farradane)

of the usual recording systems is able to cope with the provision of all these types of information in a single, openly visible unit.

'It has been found that a magnetic indicator board can be constructed to meet all these requirements simultaneously.'

This recording unit, which derives its name from the use of movable $\frac{1}{4}$ in. diameter magnets on a metal surface, is only suitable for small or medium-sized libraries and will house the ephemeral records of about 150 journals. Readers requiring information regarding its construction are advised to read Mr Farradane's paper, whilst the illustration given on p. 53 (illustration 9) is almost self-explanatory and gives a good indication of its use. Its chief virtue is that it can be read at a glance, but it provides no record of holdings and takes up valuable wall space.

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(8) *op. cit.*
(9) Gable, J. Harris. *op. cit.* pp. 120–5.
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CHAPTER IV

CHECKING, COMPLETING SETS, DISPOSAL

4.1 Accessioning

Mention has already been made in the previous chapter of the accessioning routine and the reading of the trays. The former is comparatively simple and can be divided into the following stages:

1. Unwrapping

It is preferable that all periodicals should be unwrapped *in the library* and not in the post-room. Each address should be closely scrutinized to make sure the periodical is for the library, as in some organizations it is possible for some periodicals to be addressed to other departments or individuals within the organizations which the library serves. Unless the address is carefully checked it is possible for the checker to find himself with an extra copy and having to search the waste-paper basket for the wrapper to ascertain to whom it belongs, although this eventuality may be prevented by the person unwrapping tucking the wrapper inside the cover of the periodical until it is checked. Care should be exercised when unwrapping rolled periodicals, particularly if a paper-knife is being used, as it is quite easy to damage the periodical. The more reputable agents perforate the wrapper in order to facilitate its unwrapping.

2. Arranging in order

After they have been unwrapped, the titles should be arranged in order of the record. This makes the work much easier. In very large libraries where several assistants are responsible for this work it is usual for each assistant to be responsible for certain letters of the alphabet or different frequencies.

3. Recording

Each number is entered in the appropriate space on the record card. The use of a fine lead pencil is recommended as both ink and a soft pencil are apt to smudge.

The number of copies received may be indicated by the use of a superior figure within the checking space, unless this information has been placed elsewhere on the card. If only two or three copies are received each one may be given its own card.

As has already been stated, the card should have a space for information relating to the title page and index, particularly how they are issued, for use in collating volumes for binding. This may be shown either by words or symbols. In the former case, the notation may consist of one of the following designations, which cover most cases (1):

'Has none	(title publishes neither title page nor index).
Write for	(title issues title page and index, sent only on request).
Loose	(title page or index or both sent loose in some number, usually first, second or third of next volume, but often in an issue appearing several months after the volume has finished. Many publishers issuing title page and index "loose", print it only when convenient to do so, in which case the library never knows in which number to look).
Bound in	(title page and index bound in or stapled into some number).
1st of next	(title page and index, loose or bound in, included in first number of the following volume).'

The use of symbols which can be easily memorized is also recommended, as they require very little space on the card.

4. Marking

Marking consists of putting the identification mark of the library on each separate issue recorded. This usually takes the form of a rubber stamp. Some libraries also combine a date stamp with that bearing the library's name, so that the date of receipt may be readily ascertained without having to refer back to the records. Marking may also include pasting on or attaching circulation slips, or, if the periodicals are shelved in classified order, placing on it the call-number. In other cases it may mean marking the disposition, particularly if the library receives extra copies for sending on to departmental libraries, etc.

4.2 Reading or checking the records

The assistant in charge of the accession records should regularly check or read the records in order to make certain that all current titles are being received. It frequently occurs

that a title may have been overlooked during accessioning, but it is also possible that a title may have stopped coming without the assistant becoming aware of it.

With the visible file this is quite a simple operation owing to the placement of the signals described in the previous chapter. When a gap is discovered action should be taken immediately and when the claim for the missing number has been made, this can be indicated by inserting another signal of a different colour on the working edge. Similarly, indications of claims may also be made on vertical cards and those on 'wheels' by clipping tabs to the upper edge of the former or on the side of the latter, if preferred. The last date of receipt usually acts as a basis for following-up most publications. If, when checking the trays, it is noted that a certain publication was received on the 15th of the previous month, and it is already the 18th, the current number should be claimed at once. Some libraries, using the visible record, place the signals at the date when the next issue is expected in order to facilitate checking. The majority of missing numbers are, however, caught while accessioning the number for a particular date, by noting that the preceding number has not been received.

Periodical publications are capricious creatures and frequently change their titles, amalgamate with others to form new ones, sometimes beginning anew with volume one, but often continuing the volume numbering of either of the previous titles. The frequency of a periodical is also subject to change. All these eventualities have to be looked out for whilst reading the trays, and each case presents its special problem:

(*a*) Change of Title. When a periodical changes its title, a new card should be made for it as this is the name which will be seen when the new issues arrive. The old card may be left in the record for reference purposes, or a cross-reference may be made referring to the new title, in which case the old card may be removed and filed in a dead file (see (*c*)).

(*b*) Change of Frequency. In such cases, the card may be drawn from the file and replaced by one with a form appropriate to its new frequency. The old frequency should be noted in the 'Remarks' column for reference purposes, and the old card placed in a dead file, if the library's holdings are not included in the official catalogue.

(*c*) CESSATION OF PUBLICATION. When a periodical ceases publication, its card may be removed from the record and placed in a dead file. In small libraries it is permissible for the accessions record to be also the holding record, in which case the card need not be removed, but the usual practice is for the holdings to be included in the library catalogue proper. If this catalogue is easily accessible there is no point in preserving the old cards, or 'dead file', which otherwise may be placed near the accession records.

(*d*) SUSPENSION OF PUBLICATION. The record card should be retained in the file in such cases until the title begins again or definitely ceases publication.

4.3 Claims

Claims for issues not received should be placed as soon as they are discovered. The record card should give details of the publisher or agent to whom claims should be made. A post-card on the following lines may be used:

> The following item has not yet been received:
>
> Title, vol., no. and date
>
> We shall be glad to have the number supplied as soon as possible.
>
> Yours faithfully,
>
> Librarian.

Claims for outstanding items received as gifts, however, require a little more tactful handling, and the wording should be framed accordingly, as:

> According to our records, we have not yet received the following, which you have been sending us as a gift:
>
> Title, vol., no. and date
>
> If still available, we would appreciate receiving the missing number.
>
> Yours truly,
>
> Librarian.

Librarians who have a large number of accessions and, consequently, make many claims, will find it useful to keep a record of claims outstanding as an extra check against the signals already mentioned.

4.4 Back number orders

In the process of collating for binding or disposal to a stack room, it will generally be discovered that certain sets of periodicals may have several numbers missing, or contain numbers which have been clipped or otherwise mutilated whilst in the reading room or during circulation. The orders for these back numbers should be placed immediately upon discovering the need.

Back numbers may be available from the original publishers, but as their chief business lies in publishing and selling the current issues, and too much space is required for storage if back numbers are to be kept in stock, an application may be unsuccessful. Most publishers preserve a stock of back numbers for only a short period and in many cases prefer to sell a complete volume rather than a single issue.

Back numbers invariably cost more than current ones, owing to scarcity and demand. If the publishers cannot supply a number, it may be obtainable from agents or booksellers. When placing back orders with a dealer, however, it is well to instruct him not to work beyond a certain period, as much misunderstanding can be caused by receiving from a dealer a back number months, or even years, after the number has been already secured from another source.

Additional sources for back numbers are the duplicate exchange sources already mentioned, and the duplicate lists from other libraries. Advertising in book-trade and library periodicals and trade journals may also produce some result.

4.5 Problem of completing sets

Apart from missing numbers, however, a librarian may be faced with the necessity of buying an entire set or whole blocks of volumes. J. H. Gable (2) states that in this event the following two rules may well be observed:

'1. Buy backwards in blocks of volumes, corresponding to the volumes indexed in each *Readers' Guide* or other index

volume. By this means, the user of a cumulated volume of an index will have available all the volumes of a title which are mentioned by the particular index volume he is using.

'2. It is better to take advantage of an opportunity to acquire a back volume when the occasion offers than to ransack Europe for a particular volume at a particular time. Opportunities for purchase are constantly occurring, and even though the librarian feels that there is no immediate need for the item, he should be familiar enough with the field to recognize items that seldom appear in dealers' catalogues, and familiar enough with the current prices to recognize bargains. An additional method of completing sets is through exchange of duplicates with other libraries.

'If an entire set is desired, it is usually best to wait until it is offered completely, or nearly so, rather than to begin its acquisition a volume at a time, as it is very difficult to fill broken sets by chance purchases. In addition, this procedure involves a great expenditure of time on the part of the librarian in searching catalogues and duplicate lists.'

4.51 Unesco's reproduction programme

Unless another library has a set for disposal, however, it is extremely difficult to obtain back volumes of the more important periodicals which are now out-of-print. Consequently, insistent requests were, and are being, made to Unesco by libraries and research institutions in all fields of study for assistance in obtaining copies of highly important periodicals. There are also many newly established important institutions which cannot build up their periodical collections because the publications they need are out-of-print.

To meet this situation the Libraries Division of Unesco was instructed to devise a means for the reproduction of out-of-print periodicals. This led to the establishment of the Unesco Libraries Division Clearing House Activities for Periodical Reproduction, Place de Fontenoy, Paris, 7e. Reports and enquiries received about out-of-print periodicals are centralized in the Clearing House, which publishes occasional reports on the progress of work now being done in periodical reproduction.

A preliminary selection has already been made of a small number of periodicals, all in the fields of higher studies and

advanced technology, for past numbers of which a clear demand has been expressed and which, as far as is known, are out-of-print (3). Suitable reproduction methods will be employed to give the required number of reproductions to meet the demand for subscriptions. Payment for reproduced issues may be made with Unesco Book Coupons (see p. 28), in those countries to which the coupons have been made available.

Consultation will take place with existing projects of a similar nature in various countries to avoid overlapping of efforts. The procedure is (4):

'(1) To ascertain from their publishers whether these periodicals are actually out-of-print and if microfilm or offset copies have already been made.

'(2) If high quality copies have already been made but are no longer readily available, action will be taken to improve their availability as part of the Unesco programme.

'(3) If no suitable reproductions have been made in the past, the publishers' co-operation will be cleared and provisional arrangements made for distribution, preferably through the publishers' agencies.

'(4) Prices will be obtained from microfilm for offset reproduction firms for the production work. The reproductions will be made whenever possible in the country of original publication, if high quality work can be done at a sufficiently cheap price.

'(5) If the publisher requires the help of Unesco, the list of issues, with alternative prices for film or offset will be sent to all possible subscribers. However, the publisher may know that his own needs, plus the Unesco backlog, will be sufficient for a definite quantity of copies.

'(6) According to the number of subscribers in each case, and the wishes of the publisher, it will be decided whether reproduction is to be in microfilm or photo-offset.

'(7) Orders will be placed with the reproducing firms for the quantities needed.

'(8) Arrangements will be made to distribute through the original publisher or other suitable distributor.'

Lists of the most required periodicals (5) and a partial list of reproduced periodicals (6–7) have already been issued.

The Committee on Libraries in War Areas, International

Relations Office, the American Library Association, has also been active in promoting the reprinting or microfilming of certain war-time issues of American periodicals (8).

4.52 Reprints

Although it may not be possible to obtain a certain number of a periodical it is frequently possible to obtain reprints of the more important articles. It is more usual, of course, to acquire reprints of articles from periodicals not normally taken by the library and their format tends to have them treated as pamphlets. If the view is accepted that they logically belong to periodical literature they may be filed in place of the missing number and included when the set is bound. Reprints may be acquired by a regular perusal of the abstracting journals and noting their availability. Some periodicals, such as *Chemical education*, frequently publish a checklist of reprints in stock. If an application to the publisher is unsuccessful it may be possible to obtain a copy from the author of the article—a practice which often leads to valuable contacts.

Unless a library indexes its periodicals there is no reason why reprints should be indexed or catalogued, particularly if the periodicals are already covered by printed indexes. For information on the cataloguing of reprints classed with periodical literature, the reader is advised to read Miss N. McGrath's excellent article on the subject (9).

4.6 Document reproduction

The filling of gaps by reprints is a slow process, however, particularly as their availability is always a matter of speculation. The most popular form of filling gaps has been by the various methods of 'document reproduction', as the photographic copying of documents has come to be known.

Photography has been used for copying documents since its earliest discovery. Apart from being one of the principal means of acquiring scarce or out-of-print material, it is also a popular substitute for the loan of original material. If only a few pages are requested from a large bound volume, a photocopy will save packing costs and postage. The term 'photocopy' excludes the processes of microreproduction which includes the reproduction of documents on microfilm,

microcards or by microprinting, although all are photographic processes.

One of the document photocopying processes which easily allows of making enlarged or reduced copies of an original is that of the Photostat type. 'Photostat' is a registered name given to a proprietary machine and the prints produced by it. This method uses a copying camera and the photograph is taken on to a sensitized paper, securing at the same time any desired reduction or enlargement in size. By the use of an erecting prism, the result, though negative (i.e. white lettering on a black background), is not reversed as in other processes and is therefore easily readable. This allows a saving in cost when only one copy is required. The largest size of print which can be obtained is 18 in. × 14 in. and originals up to 40 in. × 30 in. can be accommodated. A print (or positive, i.e. black lettering on a white background) can be obtained by photographing the negative. The disadvantages of the process are its high capital cost and the fact that the machine needs large quantities of chemicals before it can be put into operation, thus making short runs uneconomical.

The other process which produces a copy enlarged or reduced in size is a recent development. This is xerography, the equipment for which is now marketed in this country by Rank-Xerox Ltd. Again, a camera is used, but this is inherent in the process which uses an opaque sensitized plate which is given an electrostatic charge in darkness. It is exposed for a short time to the image of an original document projected on to the plate by a lens. The original and the copying medium are therefore not in contact. This contact is, generally speaking, the chief feature of photocopying and with the exceptions already mentioned, photocopying and contact printing are synonymous.

Contact printing does not need a camera as only a printing process is involved; without the intervention of a lens, however, there can be no alteration in size. Contact printing is usually done in one of two principal ways and the method to be used depends on what is being copied. If the original document is printed on one side only on paper which is reasonably translucent it is possible to use the transmission printing method and produce a readable (direct) copy in one step. Transmission printing is a method of exposure whereby the

original is placed between the light source and the copy paper so that the light passes through the original on to the sensitized surface of the copy paper.

To copy an original which has printing on both sides or which is printed on opaque material an alternative printing method known as reflex is employed. Copies are obtained by placing a sensitized paper with emulsion side downwards on to the document to be copied. Contact is maintained by means of a glass plate, and light passed through the sensitized paper is reflected back from the original document. This paper is then developed and a negative copy, in reverse, of the original is obtained. A positive copy can be obtained by repeating the process and using the negative as the original. The process as originally used gave one copy only but a multitransfer up to a dozen copies or so is now possible. 'Transfer' describes a method of transferring a reflex negative print on to a positive copy paper by placing them in contact.

This process constitutes something like 80 per cent. of the photocopying market. It is more properly described as diffusion transfer and is one which involves the use of fluids. Both rotary and flatbed machines are available which use the transfer process and the type of machine with a built-in developer, holding the fluids, is commonly used. The transfer process is comparatively quick, easy to operate and effective. Machines of this type for taking copies up to foolscap size are available from £50 upwards. Transfer papers are designed to give good black and white contrast and it is sometimes possible to produce a greater degree of contrast in the copy than exists in the original. If required the image can be transferred on to special translucent paper which is used to provide a medium for further copying by the dyeline, or diazo, process. The Institute of Office Management's *A guide to photocopying in the office* (10) draws attention to recent developments in the field of dyeline copying which include the production of a new type of paper which needs neither a liquid developer nor ammonia fumes. This paper is used in a process known as Diazotherm designed specifically to eliminate conventional processing. In the Diazotherm process development of the exposed paper is brought about by the simple application of heat. Machines making use of this new paper are not yet generally available.

The Infra-red or Black Heat Process, such as Thermo-fax, is not true photocopying in the literal sense and depends on reflection of heat on materials which have a metallic content. This presents limitations, as certain writing inks, vegetable dyes and printing inks cannot be reproduced. Xerography has already been mentioned and is an electrostatic process which employs fairly large and complex machinery. Copies, however, are of good quality and of relatively low cost provided they are produced in quantity.

Full information can always be obtained from suppliers of equipment. A list of these suppliers will be found in the *Guide to photocopying in the office* which is a practical guide to photocopying and discusses the advantages and limitations of the different processes and types of machines. H. R. Verry's *Document copying and reproduction processes* (11) is the standard work on the subject and also contains a classified index to suppliers.

The microreproduction of documents, either as microfilm or microcards, or microprints is now becoming more widely used, though not to the degree forecast in the early stages of its development. Equipment is still expensive although wider use would result in lower costs. All forms of microreproduction require a viewer or reader which cause much more eye strain when read for long periods than does normal print. The viewing apparatus available, particularly for microfilm, does not lend itself to scanning and constant winding and re-winding is necessary if references cited in an article have to be referred to in a list at the end. Similarly, certain types of drawing, histological drawing in particular, are difficult to consult in this form. Microfilm has to be handled with care to avoid damage, indeed it cannot compare with some papers for durability. Like cinematograph film, it is too recent an innovation, comparatively speaking, for its properties as a medium for the permanent preservation of records to be determined. The real value of microreproduction is in making available material which is, by its location or rarity, not available in any more satisfactory form. Reduction in storage space for little-used material and such bulky serials as newspapers is of secondary importance as far as the user is concerned.

Microfilm, the most popular of the microreproduction processes, takes the form of copies, greatly reduced in scale on

16 mm. or 35 mm. film. It is the cheapest of all photographic reproduction processes. Photocopying becomes an expensive business, as well as cumbersome, when more than a dozen or so pages are involved. The alternative lies in microfilming substantial extracts or whole volumes of periodicals, but the difficulties of copyright are large. The Copyright Act has upheld the claim of copyright owners that permission should in each case be sought. The 'fair dealing' clause allows for the copying of extracts only, as will be explained later. Photocopies, or positive paper prints enlarged from microfilm, are of particular value to those who have not access to a microfilm reader or who wish to bind missing pages into a volume, in which case they can be produced to exact size.

Three further processes in microreproduction are the microcard, Microlex cards and microprint. All these processes have gained popularity in the United States. These three are the main versions of the micro-opaque. The microcard is a standard 5 in. × 3 in. catalogue card accommodating not only the catalogue entry, but, in greatly reduced size, a text, or micropage, containing an average of 100 pages per card (illustration 10). It was originally intended that they should be filed in the catalogue in place of the catalogue card but this idea proved to be impracticable. Those produced with photographic emulsion on one side only tend to curl, although this difficulty is obviated by the double-sided cards now being produced.

Microlex cards measure $6\frac{1}{2}$ in. × $8\frac{1}{2}$ in. and have 200 images on one or both sides of the card. The image size is $\frac{3}{8}$ in. × $\frac{9}{16}$ in. A margin of $\frac{5}{8}$ in. along the left-hand side of the card is used for a readable title.

Microprints differ from microcards and microlex cards in that they are reproduced on 6 in. × 9 in. sheets by offset lithography from plates copied from microfilm, and have 100 images of a size $\frac{1}{2}$ in. × $\frac{4}{5}$ in. Since they are reproduced on to rag paper they are more permanent than the others which are reproduced on photographic paper. They can be stored in vertical files or in pamphlet boxes and do not require the more stringent storage conditions recommended for photographic materials.

A further form, microfiche, was developed in the Netherlands and is described as a piece of flat, transparent film, size

(1961) G 111 - G 119 OEA/Ser.G/IV

DOCUMENTOS DEL CONSEJO DE LA ORGANIZACION DE LOS ESTADOS AMERICANOS - DOCUMENTS OF THE COUNCIL OF THE ORGANIZATION OF AMERICAN STATES

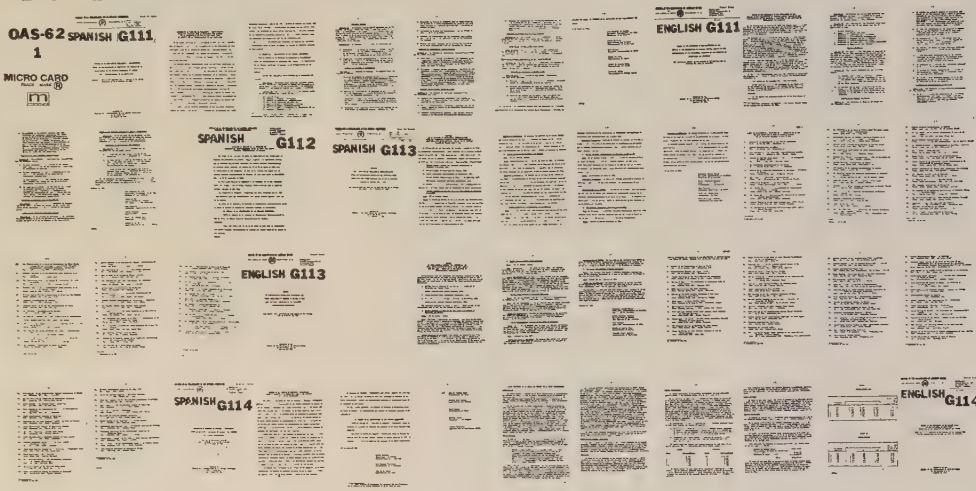

Illustration 10.—Microcard (actual size)

(*By courtesy of Microcard Editions, Inc.*)

9 cm. × 12 cm. (our 3 in. × 5 in.). Each fiche can contain 32–105 pages. Microfiche is not so durable as the micro-opaques and is more difficult to file.

It has been apparent for some years that a central body was needed to co-ordinate and standardize the development of microphotography and document reproduction in this country. Accordingly, in 1960, the Council for Microphotography and Document Reproduction was formed with the assistance of the Library Association. The purpose of the Council is to offer advice on, and promote the use of, all forms of photographic reproduction in education, research and commerce. It will:

(*a*) collect, index and publish information on new instruments, new methods of copying and new microtexts available, by means of a regular bulletin. Occasional special publications will be available at reduced prices to members;

(*b*) be prepared to advise on the most suitable equipment for a member's needs and to convey to manufacturers the requirements of differing classes of users;

(*c*) act as a 'clearing house' for information and advice, and co-ordinate research and effort in the fields of microphotography and document reproduction;

(*d*) organize a semi-permanent exhibition of copying equipment so that members will be able to inspect and compare machines away from a showroom atmosphere;

(*e*) arrange for copyright clearances and encourage the co-operative publishing of microtexts;

(*f*) organize from time to time small conferences and maintain contacts with similar organizations in other countries.

The formation of this Council will undoubtedly remove many of the prejudices against microreproduction in this country. Its journal, *Microdoc*, apart from articles, has regular book reviews, abstracts of articles, information on new equipment, lists of new microtexts, a trade directory and news items. Putting the Council's principles into practice, the second number of the journal contained a microcopy of the first two issues—either a card or fiche, as requested. The Council also published Geo. H. Davison's *1962 review of equipment for microtext* (12). International in coverage, in future years the review will cover only the new equipment appearing in Great Britain or on the

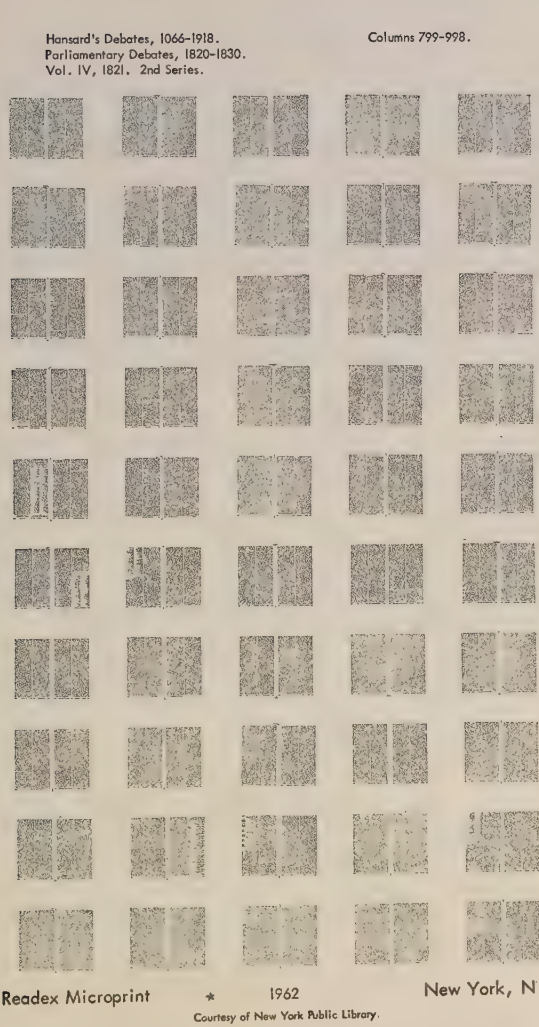

Illustration 11.—'Readex' card (microprint)
(*By courtesy of the Readex Microprint Corporation (U.K.) Ltd*)

Continent as tabulated details of American equipment are now available from the *Guide to microreproduction equipment* published by the National Microfilm Association (of America). This Association has also published a *Glossary of terms for microphotography and reproduction made from micro-images* (3rd ed., Annapolis, Maryland, 1964).

In 1961, Microcard Editions, Inc. (Washington, D.C.) commenced publication of an annual *Guide to microforms in print*, edited by A. Diaz. This list refers to all publications available in microreproduced form from commercial publishers in the United States and covers microfilms, microcards, microprint cards, microlex cards and microtext cards. Sponsored by the American Library Association, the American Standards Association published in the same year an American standard specification for micro-opaques (13). It is to be hoped that micro-opaque cards made in this country will conform to this standard.

A reprint of Alfred Günther's article, *Microphotography in the library* (14), is now available. In the article, the characteristic and forms of microphotographs are dealt with in some detail, following a brief historical introduction. Their application in libraries—for inter-library loan, preservation, periodical filing, small edition publishing, etc.—is dealt with, as well as library routines. The section on publication in microform mainly refers to the activities of the Microcard Corporation.

The section on microreproduction in the Aslib *Handbook* and the literature cited, should be consulted for further information on the subject. *Microtexts as media for publication* (Hertfordshire County Council, Technical Information Service, 1960) contains the papers and discussion of a symposium on the subject held at Hatfield Technical College in 1959. This is a publication which includes lists of micro-opaque and microfilm publishers, as well as an appraisal of microtext publication generally.

A book likely to be of great use to those coming to the subject with little knowledge of it is H. R. Verry's *Microcopying methods* (London, Focal Press, 1963) which contains an important chapter on microfilm costs. The tables in this chapter should assist anyone costing a specific job.

4.61 Document reproduction services

For libraries to be able to make full use of the possibilities offered by the photographic copying of documents it is necessary for them to know from whom copies can be obtained. Most large libraries now possess the necessary equipment for making photocopies. Those who are not so fortunate can usually make arrangements for the work to be done either by another library or by a commercial firm. All that is necessary for those who require a copy of a document which is known to to be in the possession of a particular library or institution is to make an application direct to that library or institution for a copy to be made. There is one important reservation, however. No library will undertake to supply a photocopy of a printed work which is still copyright without the express permission of the copyright owner, and consequently such permission must first be obtained. There are exceptions, and the whole question of copyright in respect of the photocopying of periodicals will be dealt with in the next section.

The International Federation for Documentation has published a directory of microfilm and photocopying services to assist those wishing to know to whom to apply for photographic copies of documents (15). This was a praiseworthy venture, but the breadth of coverage it attempted resulted in a scattered and inadequate picture. The Council on Microphotography and Document Reproduction decided, therefore, that a comprehensive directory of photo-reproduction services in Britain was needed. A questionnaire was sent to selected libraries and commercial photocopying concerns and the results appear in *A Directory of British photo-reproduction services* (16). Entries are arranged in alphabetical order by name and include details of availability, subject coverage, whether the library is prepared to take a reasonable bibliographical search within its stock, types of copies provided, and details of equipment. The latter details are given in order that librarians making applications for photocopies may recognize which libraries are equipped to give satisfactory copies of the material required. Only machines held by the libraries named are listed, omitting those belonging to other departments. It will also be a help to students and others to know where particular machines may be seen.

Notable among those listed is the Science Museum which issues to bona fide institutions vouchers (a pad of fifty costs £10) on which may be requested one photocopy of any article of ten pages provided that it is available in the library and comes within their photocopying scheme. The call number of the periodical required should be quoted from the *Hand list of short titles of current periodicals in the Science Library* (17). The Patent Office also operates a photocopying service, charging a flat rate of 9*d*. per page; the call number of the periodicals may be obtained from *Periodical publications in the Patent Office Library: list of current titles* (18). The National Lending Library for Science and Technology intends to start a regular photocopying service.

Naturally, the great national repositories, the British Museum, the National Library of Scotland, the Bodleian Library at Oxford, the Cambridge University Library, and the National Library of Wales, appear in the *Directory*, together with a surprising number of public libraries which are equipped in varying degrees to supply photocopies. Two surprising omissions, however, are those of Aslib and the Royal Society of Medicine Photographic and Film Unit.

The Aslib Document Reproduction Service is limited to members of the Association. This service has its origins in the Aslib Microfilm Service, which was inaugurated during the last war to locate and microfilm war-time enemy periodicals received in this country. Aslib consequently holds the master negatives of 14,000 issues of some 500 journals published in enemy and enemy-occupied countries during the war. Positive microfilm copies or paper enlargements can be supplied to members at reasonable prices. But this service does not confine itself to war-time periodicals. It also 'undertakes to locate, if humanly possible, any required published document, to clear copyright formalities and supply photocopies to members'. The location of the required documents, the checking of the references, and the borrowing of the documents for copying, inevitably adds to the cost, but in order to eliminate a great deal of paper work and cut down unnecessary delay, members requiring copies of documents must apply on special requisition forms purchasable from Aslib.

The Royal Society of Medicine had developed a large photo-

graphic unit which serves the field of medicine and allied sciences. This unit has resulted from the work of the Central Medical Library Bureau, which was established with the aid of a Rockefeller grant to assist in the rehabilitation of the medical libraries in Europe by providing free microfilm copies of whole volumes of medical periodicals no longer available.

At present photo-reproduction services belong mainly to non-profit-making organizations, either libraries or information services. To assist those responsible for their organization and management, Unesco has issued a reprint of F. Donker Duyvis and M. E. Schippers' *Document reproduction services* (19) which puts forward twenty-five principles which may improve performance. Dismayed by the lack of a uniform pattern in prices charged and the lack of application of international standards, the authors advocate the establishment of an international organization for reproduction services. The article concludes with an excellent bibliography on document reproduction generally. Greater standardization of methods, materials and equipment is obviously to be desired and no doubt the Council for Microphotography and Document Reproduction will do their best to achieve this. The International Federation for Documentation's *Manual on document reproduction and selection* (20) and its supplements co-ordinate on an international level technical descriptions of available copying methods and apparatus. Chapter 4 of the manual covers the costing angle.

The following are the main sources for microcards and microprint in Great Britain:

MICROCARDS

Micro Methods, Ltd,
East Ardsley,
Wakefield, Yorks.

Microprint Publications,
287 Streatham Hill Road,
London, S.W.16.

Microfilm Systems, Ltd,
Hook Rise,
Kingston-By-Pass,
Surbiton, Surrey.

Other publishers will be found in Hertfordshire County Council's Technical Information Service's *Microtexts as media for publication* (see p. 70).

The use of these cards is necessarily restricted in this country by the lack of the necessary reading apparatus, a situation which will, no doubt, be remedied in time.

Mention is made in Unesco's reproduction programme to facsimile or 'offset' copies of periodicals. These are reproduced by a photographic printing process and catalogues of those periodicals so reproduced can be obtained from:

J. W. Edwards,
Ann Arbor, Michigan, U.S.A.

Wm. Dawson & Sons, Ltd,
102 Wigmore Street, London, W.1.

Johnson Reprint Corp.,
125 East 23rd Street, New York 10, New York, U.S.A.

Butterworth's Scientific Publications, Ltd,
436 Strand, London, W.C.2.

J. W. Edwards have also reprinted several periodicals on the '4 pages to 1' process, i.e. four pages of the original on one page of the reproduction. The page size of the reproduction remains the same as that of the original in order to facilitate binding.

4.62 Photographic reproduction of copyright material

One of the most irritating delays in obtaining photocopies of documents is the necessity of obtaining permission to copy. Copyright is vested in the publisher, who can give or refuse permission according to his own custom and the circumstances. The circumstances vary in so far as sometimes the copyright belongs jointly to the publisher and author, and occasionally to the author. Generally, fifty years after the death of the author copyright ceases to exist. Permission to copy can usually be obtained, but if a publisher is contemplating the re-issue of an out-of-print work he may be reluctant to give it. From the point of view of filling gaps the re-issue of an out-of-print periodical is to be welcomed, particularly as it is unlikely to be as costly as a photographic copy, but unfortunately the librarian may have no alternative but to obtain a photographic copy in order to meet the demands of readers.

The new Copyright Bill came into force on 1 June 1957 (Copyright Act, 1956) and a survey of the principal ways in

which it now affects libraries, particularly in the photocopying of periodical articles, has been presented by G. Woledge (21).

Under Section 7 of the Act, libraries of a prescribed class may, for purposes of research or private study, make or supply a copy of any article in a periodical publication, or a part (not extending to more than a reasonable portion of the whole) of any published literary, dramatic or musical work, without infringing copyright.

The libraries prescribed by regulations made by the Board of Trade are:

(i) Any library (including the British Museum) to which Section 15 of the Copyright Act, 1911, applies.
(ii) Any library of a school, university, university college, or establishment for further education within the meaning assigned to that expression by the Education Act, 1944, and the Education Act (Northern Ireland), 1947, or any library of an educational establishment in Scotland as defined in the Education (Scotland) Act, 1946.
(iii) Any library administered by a Library Authority under the Public Libraries Acts (England and Wales, Scotland, and Northern Ireland).
(iv) Any Parliamentary library or library administered by a Government Department (including Northern Ireland).
(v) Any library conducted for the purpose of facilitating or encouraging the study of all or any of the following: religion, philosophy, science (including any natural or social science), technology, medicine, history, literature, languages, education, bibliography, fine arts, music or law.

Libraries established or conducted for profit may not make copies except for supply to the prescribed libraries.

Apart from articles in periodicals, a copy of a work or part of a work may not be made without the permission of the person entitled to authorize the copying unless the librarian does not know the name and address of such person or could not ascertain this by reasonable enquiry.

A form of declaration and undertaking, or something substantially in accordance with it, is prescribed by the Board of Trade regulations. This must be personally signed by the person

making the request to a librarian for a copy of a work or part of a work and is as follows:

'I (name) hereby request you to make and supply to me a copy of (particulars) which I require for the purposes of research or private study. I have not previously been supplied with a copy of (the said article/said part of the said work) by any librarian. I undertake that if a copy is supplied to me in compliance with the request made above, I will not use it except for the purposes of research or private study (Personal signature and date)'.

The Board of Trade regulations are contained in Statutory Instruments 1957, no. 868 (22), which relate to copying by libraries.

The Act itself provides that copyright is not infringed by 'fair dealing with a literary dramatic or musical work for purposes of research and private study'. Just what constitutes 'fair dealing', however, is not clear from the Act. Mr Woledge, however, concludes '. . . that it is the clear duty of the librarian, if he is satisfied that no injury to the interests of the copyright owner is involved, to provide the required copy, relying on the broad fair dealing exception, and not insisting on the narrower limitations of section 7. That is in any case (unless "conducted for profit" does not mean what it was intended to mean) the only course open to the librarian of an industrial concern' (23).

At the Royal Society Scientific Information Conference held in 1948 it was stated that 'Making single copies of extracts from books or periodicals is essential to research workers, and the production of such single extract copies, by or on behalf of scientists, is necessary for scientific practice'. This fact has long been recognized by many librarians and information officers, and a very large number of document reproduction services in Europe and in this country take the risk and copy within limits which are governed partly by common sense and partly by the degree to which the institution concerned is willing to chance that a test case might be brought. This is particularly so in the case of *foreign publications* provided that the copy is needed for restricted use and not sold for profit.

In order to reduce this problem to manageable proportions, particularly in regard to British periodicals, the Royal Society, as a result of the 1948 Conference, invited publishers to sign a

'Fair Copying Declaration'. The text of this declaration, which relates to scientific periodicals, first appeared in *Nature* (24) and is now obtainable from the Royal Society as a pamphlet (25). As well as the text, the pamphlet contains a list of subscribers and a list of the journals covered by the subscribers to the declaration.

The text of the declaration is as follows:

'For some time scientists have discussed the problems, created by the Copyright Act, which arise when they wish to obtain reproductions of excerpts from scientific and technical periodical publications. In the normal course of their work, scientists occasionally require for frequent reference copies of particular papers appearing in scientific periodicals which are not readily available to them. It is assumed that they take all reasonable steps to secure the original journals or separates of papers they require, either from the author or the publisher, but it is recognized that many requirements cannot be met from these sources. We have, therefore, agreed to make the following declaration to ensure that scientists have no undue difficulties in obtaining copies from libraries and other organizations supplying information. This declaration does not apply to books and other non-periodic or non-serial publications.

'We will regard it as fair dealing for the purpose of private study or research if a non-profit-making association, such as a library, archives office, museum or information service owning or handling scientific and technical periodicals published by the signatories, makes and delivers a single reproduction of a part of an issue thereof to a person or his agent representing, in writing, that he desires such reproduction in lieu of a loan or manual transcription and that he requires it solely for private study, research, criticism or review, that he undertakes not to sell or reproduce for publication the copy supplied, provided:

(1) The recipient of the copy is given notice that he is liable for infringement of copyright by misuse of the copy.
(2) The organization making and furnishing the copy does so without profit to itself.
(3) Proper acknowledgement is given to the publication from which the copy is made.
(4) Not more than one copy of one excerpt shall be furnished to any one person.

'The exemption from liability of the library, archives office, museum or information service herein provided shall extend to every officer, agent or employee of such organization in the making and delivery of such reproduction when acting within the scope of his authority of employment. This exemption for the organization itself carries with it a responsibility to see that employees caution those receiving copies against the misuse of material reproduced.

'We reserve the right to take action against any person or organization copying or misusing for any purpose whatever the whole or part of a work published by us without abiding by the conditions laid down herein unless the person or organization has our special permission in respect of the item to be copied. We reserve the right to withdraw this declaration.'

This declaration is confined solely to *British scientific* periodicals. Miss Bogan, in the latest edition of the Aslib *Handbook*, gives an outline of the conditions of copyright and states '. . . a librarian making any use of photocopying would be well advised to study not only the Act itself, but also the report of the committee whose recommendations are to a large extent embodied in the Act, as well as other interpretations of the meaning of the Act' (26).

Papers covering the position in the United States have been written by M. O. Price (27) and V. W. Clapp (28). The principal countries whose publications are *not* copyright in this country are the U.S.S.R., Eastern Germany (with the exception of Berlin), and China.

4.7 Disposal

Every library should have a clearly defined policy of preservation for its periodical collection. Miss Beatrice V. Simon has grouped periodicals in this connection into three broad classes (29):

(1) Those which are required for their immediate use and discarded at short intervals.
(2) Those that remain useful for about five years.
(3) Those that, for many reasons, are kept permanently.

This plan seems a logical outcome of the shortage of space that afflicts nearly all libraries. No library can afford to hoard

all its periodicals indefinitely—apart from the problem of space, the rising cost of binding, binding cases and pamphlet boxes also presents a serious problem. P. F. Cole in a relevant study of journal usage versus age of journal (30) writes: 'As an illustration of the relationship, a petroleum library which retains its journals for twenty years is retaining 35 per cent of its stock and therefore using 35 per cent of its floor space to satisfy a mere 4 per cent of the total demand. For subject fields where the median age of the demand is less than three years, the relationship is even less favourable.

'From this one may conclude that petroleum libraries in locations such as the United Kingdom, where it is practicable to satisfy a small residual demand by inter-library loan, will find it difficult to justify retention periods longer than thirteen years.'

A solution is offered by Mr Fremont Rider by the use of microcards (31), but the practical problems of introducing them into this country have yet to be overcome. A more popular solution is the practice of clipping journals and discarding them after a time. This means that all articles that are indexed can be noted on the covers, cut out and filed in pamphlet boxes before the journal is discarded. Any odd issues from which articles are not removed may be sold to a dealer, offered to another library, or exchanged.

If each library, however, grouped its periodicals as Miss Simon suggests, and entered into a co-operative scheme with other regional libraries by which some libraries retain back volumes of certain journals and others retain those in other fields, there would be less danger of important runs of periodicals disappearing entirely. As a further precaution against this possibility, a plan adopted in the United States might be considered in this country. This is reported by Miss Barbara Johnston (32), who states: 'At Buffalo, N.Y., the New Eire County Library will receive sets of unbound journals from special libraries, will keep two sets of each title and dispose of any extra copies. At Harvard College space is rented to other libraries in the New England Deposit Library, built by the college as a store for little-used material, but as yet no attention has been given to collating the collections there to eliminate duplicates, although the building is almost full.'

The type of periodical most likely to be disposed of indiscriminately is contained in Miss Simon's first group. This is generally material of an ephemeral nature which is common to most information services and is of the news-sheet and house-journal type. Most libraries discard this type of periodical without first ascertaining whether a set is available in another library. If no library in a co-operative scheme of disposal is willing to keep it, and it is not available in any of the National Deposit Libraries, back numbers should be offered to the publishers after a decent interval to ensure there is at least one complete set in the country. In the case of foreign house journals it may prove to be the only set available in the U.K., which would make its retention essential. It should be mentioned, too, that if a periodical received as a gift does not receive sufficient attention to warrant its retention, a courteous letter should be sent to the publishers asking them to remove the library's name from the mailing list.

No obsolete journals should be sent to salvage without first being advertised in the disposal columns of *Aslib proceedings*, the *Library Association record* or the *Unesco bulletin for libraries*. The British National Book Centre, Malet Place, London, W.C.1, may also be able to dispose of them to a library in this country or overseas. If at all possible the material should be given away or exchanged, as it will be discovered that good relations are often of more value than money. If it appears that no library, the publishers, nor any dealers want it, it can be sold after a suitable waiting period to a waste-paper merchant to augment the library's income.

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CHAPTER V

CIRCULATION

5.1 Pros and cons of periodical circulation

In theory there should be no need to circulate periodicals, but in practice there are few libraries which do not circulate at least some of their stock. Miss Gertrude Bloomer, an American librarian, has written: 'In a survey of twenty-four pharmaceutical libraries, it was found that all but one of them circulate current journals regularly to personnel in various departments throughout their organizations. In 50 per cent. of the libraries there is some discrimination as to the personnel eligible to receive journals, and in 66 per cent. only certain types or titles are circulated. If any restriction is set up, it is usually made in scientific journals. More than 50 per cent. receive duplicate copies of these journals most in demand; these are usually circulated while one copy is kept in the library' (1). A similar survey made in this country would, no doubt, produce a similar result.

According to the Aslib survey made in 1956–8 (2) the information/library units of forty-two of the fifty-two sampled organizations circulated current periodicals to employees of the organization as one means of disseminating information. Not all the periodicals taken by an organization were necessarily circulated.

The median number of periodicals circulated by the thirty-four organizations which gave figures was 150 (*cf*: median number of periodicals taken by whole sample, 210). The median number of individuals (or groups) to which periodicals were circulated was seventy-five.

The chief methods employed for circulation were:

Controlled circulation, i.e. periodical returned to the library between each reader so that the location of every issue was always known.

Uncontrolled circulation, i.e. periodical circulated to a list of people, the last person on the list returning it to the library.

Selective circulation, i.e. individual issues circulated to people to whom the contents would be of interest (as compared with the automatic circulation of each issue of a periodical to the same list of people).

Method of circulation periodicals	*Organizations*
No circulation	10
Controlled circulation	27 (18 selective)
Uncontrolled circulation	15 (9 „)
Both controlled and uncontrolled	4 (3 „)

H. Thornton of TMM (Research) Ltd has described an attempt to stop circulation of periodicals for a trial period of three months, and its failure; the service is useful and therefore desirable, despite the disadvantages (3).

The arguments advanced in favour of current periodical circulation are:

(*a*) The research staff are too busy to be able to spend much time in the library, and the senior staff in particular must be available in their office or laboratory in case they are required.
(*b*) Current literature can only be read or scanned by busy people in odd moments or during leisure hours.
(*c*) The distance from the library prevents some people from using it regularly.
(*d*) Small libraries have not sufficient reading room.
(*e*) Material must be got to readers rather than remain unused, but available, on the library shelves.

However, there are equally valid arguments against the practice:

(*a*) The research staff should be made to realize the value of a visit to the library, to browse and see other accessions other than journals, and to make contact with the staff.
(*b*) If current journals are circulated, and no duplicate copies are received, the current numbers will inevitably not be available for other readers in the library.
(*c*) There will be delays, possibly of several weeks, before requests for ordinary borrowing can be met.
(*d*) The loan of journals to others not on the circulation list is a common failing and adds to the delay, making it

difficult to trace an issue quickly and often resulting in lost copies.

(*e*) Failure to pass journals along within a specified time adds to the confusion, unless they are passed to each person on the list by the library itself, which is often an involved process.

(*f*) The duties connected with circulation may occupy as much as 25 per cent. of the working day of one member of the staff in an average library, and in some cases circulation is a full-time job. Often special messengers are employed to deliver journals, although it is more common to depend on the normal internal postal service. In any event, it adds to the running costs of the library.

5.2 Compromise arrangements

There is a great deal to be said for all the above arguments, conflicting as they are, and consequently a compromise arrangement is generally reached, as is apparent from Miss Bloomer's statement.

The best method is to have an entirely separate supply of periodicals for circulation, but rarely in a small library can the expenditure be justified. In some government libraries, however, where periodicals must be circulated among several thousand people, as many as thirty copies of a single journal are taken. In this case the expenditure is obviously unavoidable, particularly as copies are circulated to officers scattered throughout the country and not concentrated in one area. If two or more copies of a journal are taken, and one is kept in the library for reference, the whereabouts of the duplicate is not so important. Obviously, it is not necessary to obtain duplicate sets of all the periodicals received in the library, but only for the more important or for those for which there is a great demand. The number ordered depends on the size of the library and the number of readers. Duplicate copies can be marked, with either 'D' or 'C' (i.e. for 'duplicate' or 'circulation' copy), and immediately put into circulation. Where more than two copies are received they can be numbered, 1, 2, 3, etc., to facilitate the recording and circulation.

Those journals for which there are no duplicates will always be available for consultation in the library, and, if

necessary, can be lent for overnight reading. Some libraries will not allow current periodicals to be circulated immediately. Mr W. J. Merrick has described a method in which all current periodicals have a circulation slip (illustration 12) stapled to them on which the names of the staff to whom periodicals are normally circulated are arranged alphabetically, with space for additional names. The periodical remains in the library for an inspection period of seven days and anyone who has the opportunity to read the publication is encouraged to cross his name from the circulation form. Similarly, anyone desiring to have a publication circulated to him puts a tick against his name or against the names of any others to whom he considers the publications should be circulated, adding page numbers, if necessary, in an appropriate column. The librarian, or any reader, can add further names which do not already appear on the slip (4). At the end of the inspection period the periodical is immediately put into circulation (see p. 89).

There should be some restriction on the number of periodicals circulated to each reader if the above scheme cannot be put into operation. At one library, for instance, no reader may have more than twelve journals per month circulated to him, and they must have a direct bearing on his work. This rule might not be acceptable, however, to an organization doing fundamental research involving the techniques and theories from other sciences. Many libraries circulate only to senior members of the staff. There should be no restriction on the circulation of abstracting periodicals, unless the library issues its own library bulletin or circular. If at all possible, it is a good idea for the library staff to mark those items in the abstracting periodicals which are held by the library.

Instead of a general circulation of periodicals, many librarians issue a weekly bulletin listing the items of interest in the current literature of the week so that readers can ask for particular issues of interest to them. The articles are selected by the librarian or information officer and the tables-of-contents of the periodicals can be marked accordingly. The bulletin can be prepared by a typist collecting the current journals each week after they have been marked, arranging them in order of title and typing the bulletin by copying the title of each, followed by so much of the table-of-contents as

is marked. Request pads can be issued to readers providing blanks for the name of the reader, date of request, title of journal, volume number, year, pagination and a space for notes in which the reader can indicate why he wanted that particular issue when it is sent to him.

A suggestion made by Alice V. D. Gazin, an American librarian, that publishers supply, by subscription at a nominal rate, reprints of tables-of-contents to be circulated instead of the periodical or a library bulletin (5) has not fallen on stony ground. *Current contents*, a weekly publication of the Institute for Scientific Information, Philadelphia, reproduces tables-of-contents, some in advance, in two fields—Space, electronic and physical sciences, and Chemical, pharmaco-medical and life sciences. Similar American publications are *International technical titles*, a monthly publication, and *Contents in advance*.

Another suggestion put forward is that publishers furnish a microcard copy of the contents of each issue of a periodical. It should be kept for reference while the journal is circulating, and at the end of the year the journal could be bound if it is likely to be referred to often, or, if less valuable for reference, the microcard could be kept and the journal discarded (6).

Neither suggestion has been adopted to date in this country. The Massachusetts Institute of Technology found a solution by routing accumulated tables-of-contents of selected periodicals by Multilith (7). At the Olin Mathieson Chemical Corporation the Contoura-Portable photocopier is used. Transparencies are made of the contents tables the day the journals arrive; these are used as masters for the multiple distribution of copies. Requested articles are photocopied in order of priority and sent for retention if desired; if a whole issue is required it is sent on loan for three days after the various photocopies have been made (8). Similar systems have been put into operation at the U.S. Naval Gun Factory Technical Library (9) and the Arnold Engineering Development Centre (10). Although designed to cut down circulation the time spent in making photocopies, plus the expense, may deter many libraries from making similar experiments. An analysis of the system at the Arnold Engineering Development Centre, shows a 100 per cent. increase in time spent, but a reduction from 84 cents to 41 cents in the labour cost for each loan.

In a research association where the librarian or information officer has some means of keeping in direct touch with the current work of the research officers, it is often the practice for him to look through all the periodicals and draw the attention of the staff to articles they would not otherwise see. In other cases a 'reviewer' is appointed from the research staff to whom the periodical is circulated first, and who is allowed to add to the circulation list other members of the staff who do not usually see the journal but might be interested in a particular article. This reviewer can also mark the articles to be indexed.

In order to supplement circulation and to keep personnel informed of current literature some libraries post photo or typewritten copies of tables-of-contents of new periodicals on their library bulletin boards. At others, a list of journals received each morning is displayed in the library.

5.3 Methods of circulation

There are various systems in use for circulating periodicals, varying according to the policy and size of the library:

(1) Periodicals may be allowed to circulate freely from one member of the staff to the next without returning to the library. This is accomplished by attaching a list of names on a routing slip and trusting that the last person on the slip will return the periodical to the library. It is wise to set a time limit for each reader—generally three days for English-language periodicals and a little longer for foreign language publications. All instructions to readers can be put at the top of the slip. If only one copy of a periodical is received and circulated, however, and is circulated to a large number of readers, it takes time and effort to locate it, and it frequently happens that a periodical will never get past a particular person's desk. Apart from the time lag and the difficulties of location, this 'wholesale' routing means that the periodicals are never at hand as bibliographical tools or for reading purposes in the library. This is even more evident if the periodical has a large circulation.

(2) If the library cannot afford to buy duplicate sets, the periodicals may be sent on loan to a group of three to five readers, or a particular department, and returned to the library to be issued to another group. This method has the advantage

of simplifying the location of an issue which fails to return at the proper time, and does ensure that the periodical will be in the library on a particular date for any person who may wish to consult it. If a member of the library staff can be spared to cope with the extra work involved, it is an even better plan if the periodical can be returned to the library after each loan to a single reader so that there is a record of its whereabouts at all times. A reader who is unable to deal with the periodical when it is sent to him can return it with a note asking it to be sent back when the next reader on the circulation list has finished with it. In the case of 'wholesale' or 'group routing', the periodical can be passed on by him to the next person on the list with a request to have it back later.

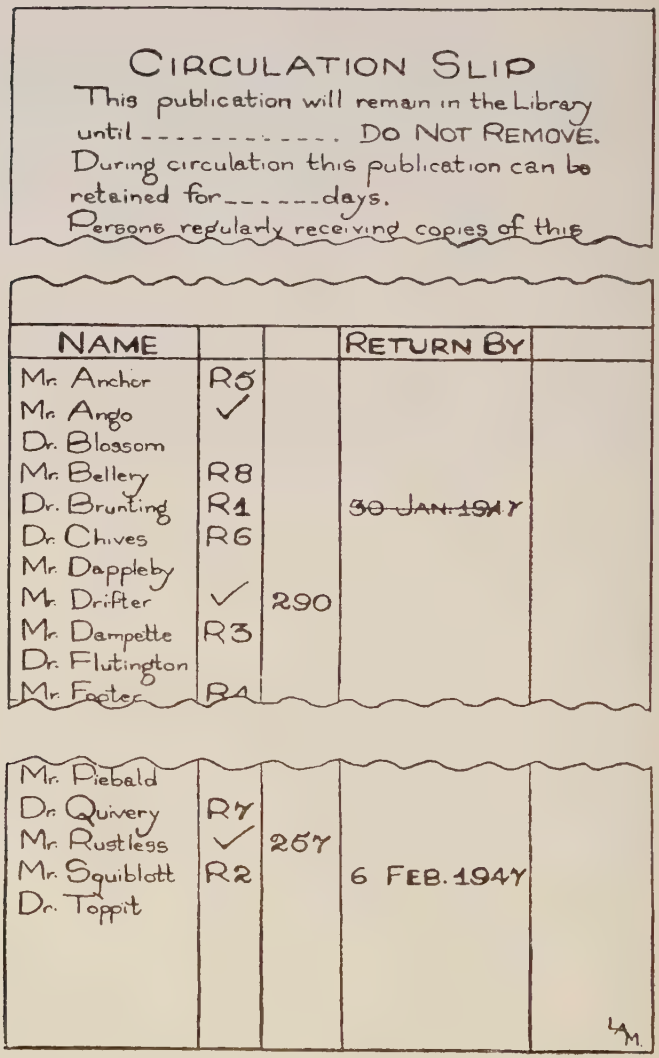
(3) Periodicals may be allowed to accumulate until there are several for each reader and then sent to him in a springback folder or box. Although this means that the periodicals are protected, circulation may be delayed if the reader keeps them all until he has read the last. Journals should be protected if possible as they are likely to end up in a poor condition and unfit for binding if they are circulated to a number of readers; they may be placed in envelopes carrying the routing slip if necessary.

5.31 Circulation or routing slips

The format of these slips obviously depends on the method of circulation adopted. No standard forms are obtainable. In all cases, however, the order of circulation should not be on an alphabetical basis, but according to the nature of the work of each reader and its relation to the periodical concerned. If slips are already prepared, as suggested by Mr Merrick (see p. 86), the order of circulation may be determined as follows:

'The names of the staff are arranged alphabetically in the first column with space for additional names (illustration 12).

'In the second column an R is written against the names of the persons who receive each issue of a particular periodical. A figure is written after each R to indicate the order of circulation. . . . The positioning of the letter R and the figures is taken from a permanent record for each periodical in the circulation record. Because in some cases the contents of a particular issue make it advisable to vary the order of circulation



CIRCULATION SLIP

This publication will remain in the Library until ---------- DO NOT REMOVE.
During circulation this publication can be retained for------days.
Persons regularly receiving copies of this

NAME			RETURN BY	
Mr. Anchor	R5			
Mr. Ango	✓			
Dr. Blossom				
Mr. Bellery	R8			
Dr. Brunting	R1		~~30 JAN. 194Y~~	
Dr. Chives	R6			
Mr. Dappleby				
Mr. Drifter	✓	290		
Mr. Dampette	R3			
Dr. Flutington				
Mr. Foster	R4			
Mr. Piebald				
Dr. Quivery	R7			
Mr. Rustless	✓	267		
Mr. Squiblott	R2		6 FEB. 1947	
Dr. Toppit				

Illustration 12.—Circulation slip
(*By courtesy of Mr W. J. Merrick*)

after the above entries have been made, a special order of circulation can be arranged by inserting new figures alongside the names. . . .

'In the fourth column the date for return is stamped.'

A routing slip suitable for a 'group' circulation is given on p. 92. It is self-explanatory. The 'See page' column may be used by the librarian or one of the readers to draw the attention of a particular reader to a certain item or article.

A simpler form for this purpose and used for the first copy of a periodical will be seen in Miss Jacob's composite record on p. 94.

Slips used for 'wholesale' routing may be the same as in illustration 13, with the elimination of the words 'in EACH DEPARTMENT' from the instructions and 'library' from the first column. If periodicals are returned to the library after each reader has finished with them this form may be used with appropriate alterations, although it may be simpler to use the normal loan records for this record which cannot really be described as a 'circulation'.

5.32 Records

(i) Visible Record Cards. Reference has already been made (p. 50) to the auxiliary cards, or flimsies, housed either in the pockets or hung over the main card in visible indexes. These can be very conveniently designed to give all the information required regarding periodical circulation according to the practice of the library concerned. These records are of an ephemeral nature, with the possible exception of circulation instructions, and can be destroyed when the cards are full and all the actions completed. They should not be disposed of too hastily, however, as readers often ask for a particular periodical they 'had last week and returned'. They may also be needed for statistical purposes.

On p. 51 will be found an illustration showing a composite record in use at the Headquarters Library, Department of Scientific and Industrial Research. Miss Jacobs, in her article describing this record (11), explains:

'A certain amount of space may be reserved, too, for the set circulation, or routing records. In saving space on the flimsy, described below, used in this routine, it is helpful and time-

CIRCULATION SLIP

IMPORTANT

The LAST reader in EACH DEPARTMENT must return this publication to the Library.
Each reader should complete the date and initial columns.
During circulation this publication can be retained for days by each reader.

TITLE OF PERIODICAL.....DATE.....

Name	Dept.	See page	Date passed to you	Date passed on by you	Initials
Mr. A.	Loco.				
Mr. B.	Do.				
Mr. C.	Do.				
Library					
Mr. D.	D.E.T.				
Mr. E.	Do.				
Library					
Mr. F.	Gen. Eng.				
Mr. G.	Do.				
Mr. H.	Do.				
Library					

Illustration 13.—Circulation slip for group routing

saving to have listed the names of recipients on a permanent card in the upper pocket; opposite each name is a number which is used as a code when noting circulation "Ins" and "Outs". It is written in hard pencil, as is advisable with all these index records, and may be altered as personnel changes. Dates of alterations must always be noted to avoid later confusion. If routing slips are used on the journals, a small supply may be tucked into the upper edge of the pocket for ready use.

'The circulation flimsy, or rider, just referred to, is a simple affair ruled across at intervals of $\frac{1}{6}$ in. and divided vertically into three columns which repeat across the sheet, each group of three being used for one issue (illustration 14). A horizontal heading is provided across the top in which the issues are entered as routed. The first of the three columns is for the name code, the second for the date sent, the third for any note, such as "Days lost". No column for "Date Returned" is necessary as the next "Date Out" is, of course, the same.'

It will be seen from Miss Jacob's illustration that a numerical code is used to indicate borrowers. This is quite a common practice and avoids the difficulties of trying to fit long names into a small space. This numerical code can also be applied to 'group' routing.

A visible record, using a specially designed form (illustration 15), is advocated by Mr Merrick (12):

'The bottom of the form is specially designed for use for a Kardex visible index. If a large number of forms can be ordered it is advantageous to have this portion contiguous with the remainder of the form, which in that case must be on card, since it is not possible to use paper for the bottom portion. Otherwise, printed forms can be used with a standard printed inset, obtainable from Kardex suppliers.

'The first and second columns correspond to the circulation forms (illustration 12), but here a permanent record of persons regularly receiving each periodical is maintained, together with the order of circulation.

'The remainder of the card is ruled vertically into twenty-six columns, so that each card will last for six months in the case of a weekly periodical, and longer for monthly and quarterly periodicals. For weekly periodicals each column is headed

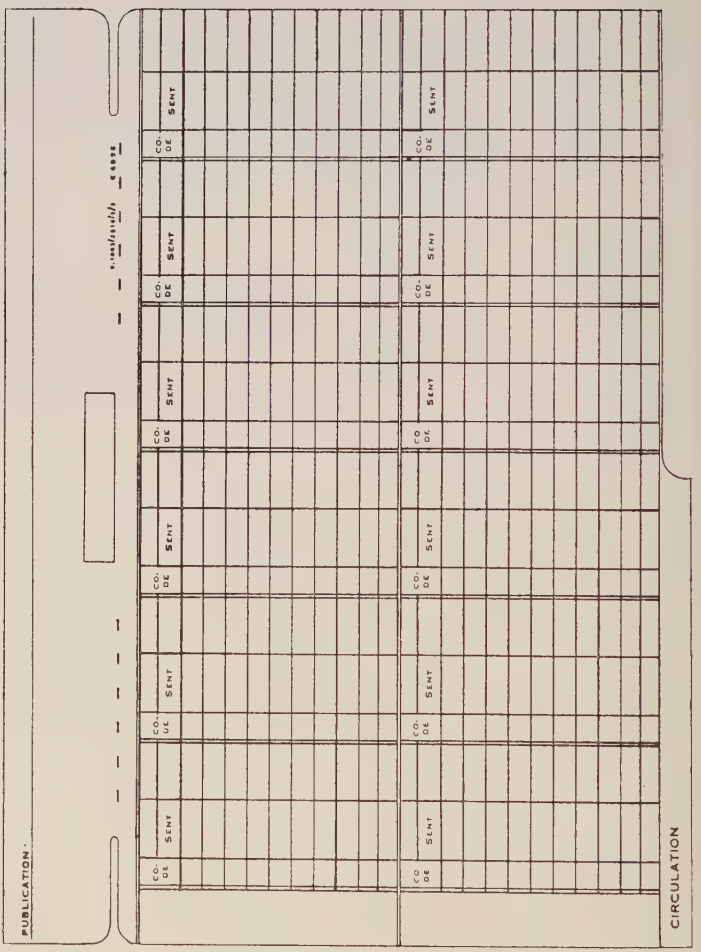


Illustration 14.—Circulation record (auxiliary card in combined visible record)

(*By courtesy of Miss Ruth Jacobs*)

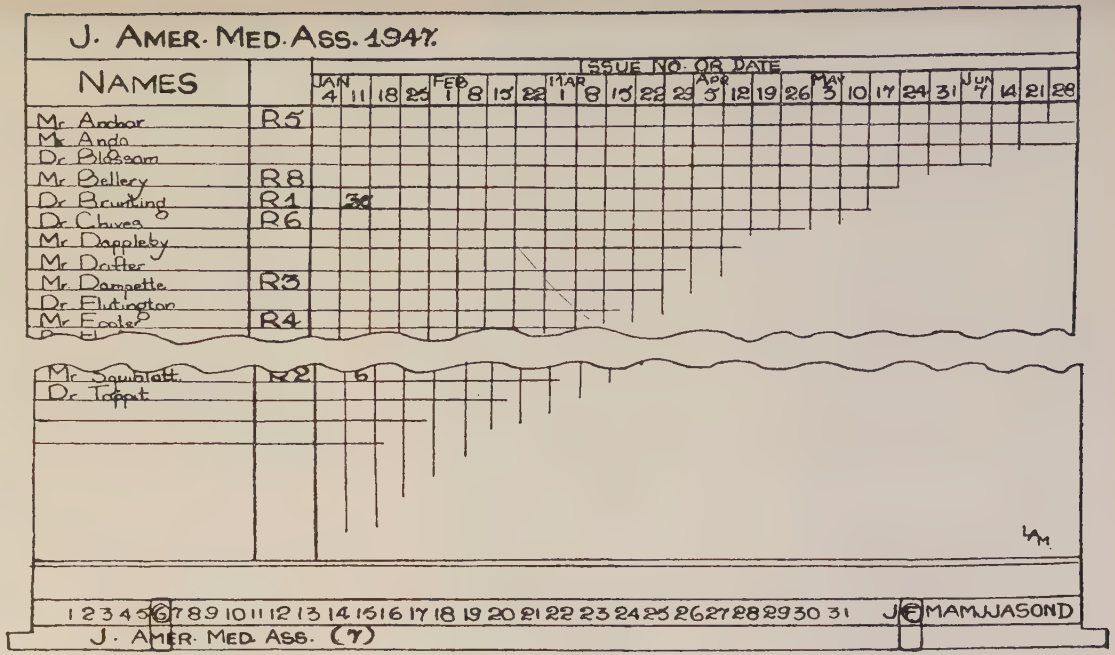

J. AMER. MED. ASS. 1947.
NAMES
ISSUE NO. OR DATE
JAN 4 11 18 25 FEB 1 8 15 22 MAR 1 8 15 22 29 APR 5 12 19 26 MAY 3 10 17 24 31 JUN 7 14 21 28
Mr Anchor
Mr Ando
Dr Blossom
Mr Bellery
Dr Brumbling
Dr Chivea
Mr Dappleby
Mr Drifter
Mr Dampette
Dr Flutington
Mr Footer
R5
R8
R1
R6
R3
R4
30
Mr Squibbett
Dr Toppit
R2
6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 J F M A M J J A S O N D
J. AMER. MED. ASS. (7)

Illustration 15.—Circulation record as main card in visible index
(*By courtesy of Mr W. J. Merrick*)

with the "week-ending" date, otherwise the months or issue numbers.

'The bottom portion is arranged so that coloured signals can be moved along to indicate that date (day and month separately). Under the date line there is space for typing the names of periodicals, and in the case of the particular system being described, the number of days allowed for circulation of each periodical.

'The circulation is organized as follows:

'(1) The circulation slips on all publications ready for circulation (illustration 12) are checked against the circulation record, and for any names ticked, a horizontal mark is placed in the square corresponding to the names and issues concerned. A temporary change in the order of circulation is not recorded, as no simple way of doing so has yet been found.

'(2) The date for return in respect of the first name to receive the publication is stamped on the circulation slip, and the day (e.g. 23 for January 23, 1947) written in the appropriate square.

'(3) The coloured signal is moved to cover the corresponding day at the bottom of the form in the circulation record.

'(4) The publications are delivered by an assistant (or by post to other establishments). At the same time all publications ready for return and those due for return are collected and reissued the following day.

'(5) Each morning the publications due for return are ascertained by the position of the signals. For the sake of simplicity the entries are cancelled and the signals returned to "zero", and a list of those to be collected made. The collection is made by the assistant.

'(6) Re-issue to the next name on the circulation slip simply means repeating steps (2) and (3) as above. In the case of periodicals for which two or more separate issues may be circulating at once, the signal is always set for the earliest date of return.

'It has not been found necessary to use a signal for the months, since no circulation period exceeds twenty-eight days, and, therefore, the use of the day only cannot give rise to confusion.'

This system shows very satisfactorily the date each issue is due back and the location of each periodical. Its disadvantages

are that it would be very difficult to incorporate into any combined record, unless the more permanent records were relegated to the auxiliary cards or riders.

Miss Johnston, in her report (13), gives details of a similar system used at the Institut des Fruits et Agrumes Coloniaux, Paris: '. . . coloured signals are used to record the circulation of journals to a small number of sections of the Institut. The visible border of the cards have twelve squares representing the months, and a square for each section of the staff. A coloured signal is inserted at the month when that issue of the journal goes into circulation, and another signal of the same colour is inserted at the square for the section which has it, and moves to the next section when the journal does. The issue for the previous month or two months may still be circulating, but will be recorded by signals or another colour. This system has the disadvantage that it leaves no record of the part movements of the journal, and these are sometimes quite useful. . . .'

(ii) Vertical Cards Records. In the vertical file catalogue the circulation record, which is of an ephemeral nature, is necessarily kept separate from the accessions and other records. In the case of 'wholesale' routing, however, circulation may be recorded on the main accession card for monthlies (see illustration 7) by using a stroke instead of a date to indicate that an issue has been received and gone into circulation, and another stroke can be put through this to indicate that it has been returned to the library. For other frequencies, a small stroke may be placed either alongside or above the date. If this policy is adopted, circulation instructions will have to be maintained on separate cards, and if more than one copy of a periodical is received, each copy will require a separate record.

If possible, however, a separate card should be used for the circulation record with routing instructions and any necessary code numbers on the obverse side. The circulation record used by Miss Jacobs (illustration 14) can easily be adapted for this purpose, particularly as it is so suitable for 'group' or departmental routing. The departments can be indicated by abbreviations or initials and groups by a numerical code reference in order to facilitate entry. When the periodical is returned to the library a stroke can be put through the date to indicate the fact. A satisfactory record should, however, show the date

each periodical is due back, as well as the location, and the third column may well be used for this purpose, as well as for remarks, which will probably be very infrequent and can be entered in a different coloured pencil or ink to avoid any confusion.

If the Library favours controlled circulation this form can also be used. If the circulation is very large, however, and there are no duplicate copies, it may prove more economical to keep a circulation card for each issue showing the date on which it goes out, the person to whom it goes and the date it is to be returned. If periodicals are only sent to those who request them it is simpler to treat them as ordinary loans, which will be dealt with in the next chapter.

A. J. Walford has given an excellent and detailed account of the circulation of periodicals (with descriptions of various practices) in the latest edition of the Aslib *Handbook* (14); readers are strongly advised to study it. The American Library Associations, and Council on Library Resources' *Study of circulation control systems* (15) contains a summary of existing practices for the routing of periodicals in special libraries and comes to the conclusion that if a sufficient number of persons in a department wish to see a periodical, it may be less expensive to send a duplicate periodical subscription to a department than it is to route it from the library.

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CHAPTER VI

LENDING AND BORROWING

6.1 Policy

There is a wide variation in policies regarding the lending and borrowing of periodicals. The circumstances are very similar to those of circulation, but whereas the former action is generally governed by internal policy, external factors, particularly the policies of other libraries, must necessarily influence the librarian's attitude towards the lending and borrowing of periodicals. The chief argument against lending is that since periodicals contain more up-to-date information than books, and consequently are one of the research worker's chief tools, they must be available in the library at all times. But obviously a library cannot take and house all the periodicals it may require and has to rely on being able to borrow certain periodicals from other libraries; if every library adopted a 'non-lending' policy for all its periodicals a great deal of fundamental research would be interrupted and delayed. The obvious answer is compromise and co-operation—certain periodicals must be kept back for reference purposes and others lent, a policy which calls for co-operative planning with other libraries, principally of a regional nature.

One of the arguments against co-operative lending schemes, particularly amongst industrial librarians, is that there is a risk of a rival organization obtaining information of a confidential nature, but the changing attitude towards research since the war has almost banished this bogy. This changing attitude has also influenced those institutions who formerly argued that since their libraries were financed by their members, then the material in them must be used solely for their benefit. There is, however, almost unanimous agreement that librarians cannot be expected to lend the current numbers of their periodicals. When duplicate copies are taken the problem of lending is obviously not so vexatious as far as recent issues are concerned, but as the majority of libraries rarely retain their duplicate copies after a certain period, the problem of lending

back numbers remains, particularly if they are bound. Most librarians feel uneasy about lending a bound volume, which, if lost, might be more difficult to replace than a single issue.

Those libraries which possess photocopying apparatus are in the happy position of being able to offer a photocopy of a required article if they are reluctant to lend a copy of a periodical or a bound volume. The Science Museum Library, for instance, does not lend scientific periodicals most in demand, but articles from them may be obtained through their photocopying service. Many borrowers prefer this, as apart from having the article as a permanent acquisition, it often proves cheaper, in the case of short articles, to have a photocopy, than to pay the combined postages and a registration fee for a postal loan, particularly in the case of a heavy, bound volume. The time spent in packing and the cost of packaging materials are also deciding factors in favour of photocopies, although it must be admitted that photocopies are rarely popular with readers, who usually prefer to consult the original. The position regarding copyright in relation to the photo-copying of periodicals has already been explained in Chapter IV.

Among special libraries there is a tendency to make a direct application to a likely library for the loan of a periodical instead of first trying the recognized inter-library loan services. Although this is usually done to save time, in many cases the library asked to lend the periodical may not be prepared to lend except to its own members or is prepared to lend only through the recognized loan services, with a consequent loss of time. The practice of direct application is also very annoying to some libraries who may be consistently asked to lend a particular periodical which may be available from a dozen other libraries through the recognized channels. Direct loans are usually made only if there is some mutual arrangement or if the libraries concerned are very familiar with one another.

A. G. Mackenzie, in a survey of inter-library loans in British universities (1) found that it is in borrowing periodicals that the direct request is most used. His survey shows that 61·7 per cent. of borrowings are direct and 63·7 per cent. of borrowings are of periodicals; the additional 2 per cent. can well be accounted for by titles of which no loanable set is recorded in published

lists and union catalogues, and which must therefore be sought through the National Central Library.

Mackenzie has presented an analysis of the total of 3,398 periodical titles borrowed with distribution of borrowings by subject, form, and date of publication. This gives some indication of the internal resources of individual libraries and, to some extent, the demands which the universities can anticipate will be made by other universities. Science subjects accounted for 43 per cent. of the borrowings in the sample.

In the Aslib *Survey* (2) it is reported, 'Co-operation between libraries for the benefit of their users is well developed in the U.K. and its value generally acknowledged, but some special librarians claim that the demands made on them by outside borrowers are unreasonable, and a few are known to have restricted their outside lending, or to have discouraged it, e.g. by not allowing their holdings to be listed in union lists. The most common complaint is of requests to borrow from specialist libraries current documents commonly available in public libraries. . . . Six organizations, all large but each in a different industrial group, lent to outside borrowers about as much as they borrowed from outside. At the other end of the scale twenty-two organizations (half those reporting) lent 20 per cent. or less of the number of items they borrowed. It would appear then, that industrial and commercial libraries as a whole gain substantially from inter-library loans. (Other types of library, e.g. the Science Library and institution libraries, lend far more than they borrow.)

Aslib is prepared to negotiate loans on behalf of its members if a periodical is unobtainable through the usual channels.

Policies regarding internal loans must obviously be influenced to a great extent by those prevailing for circulation. The usual practice, however, is to allow current periodicals out for overnight reading and back numbers for a limited period, ranging from three days to a week. In the case of bound volumes the period is usually limited to one or two days. The problem is principally one of recording, which will be dealt with in a later section of this chapter.

6.2 Inter-library loan services

The chief aim of the inter-library loan services is to help those libraries who find themselves unable to cope adequately with

increasingly exacting demands made upon their libraries. In practical terms, this means that periodicals not available in a particular library may be obtained on loan through the National Central Library, Malet Place, London, W.C.1, which is the national library organized for this purpose. The National Lending Library for Science and Technology, Boston Spa, Yorkshire, exists to serve the scientist and technologist. Full particulars of the National Central Library will be found in the Vollans report on *Library co-operation in Great Britain* (3). This organization can not only draw upon the collections of periodicals from a great number of special and university libraries which come within its group of 'outlier' libraries. Applications for books and periodicals through the N.C.L. should be made through the nearest public library or county library, or (in the case of Aslib members only) through Aslib. Application can be made direct to the N.C.L. only if a library is a co-operating, or 'outlier' library. Any library wishing to join this co-operative lending scheme should make an application to the Librarian of the N.C.L. Regular borrowers are issued with the necessary requisition forms.

The National Lending Library for Science and Technology, which was opened in 1962, only lends to organizations on an approved list of borrowers. These include not only university and special libraries but also a small number of public libraries. It uses special loan request forms which cost £3 a pad of 50. The price is intended to cover the average cost of postage arising from 50 requisitions. The aim of the Library is to deal with all straightforward loan requests on the day they are received. Items not available at the N.C.L. are sent to the Science Museum Library, when that library is likely to satisfy them (4).

Aslib also has an inter-library lending service for its members, many of whom are libraries otherwise outside a national service. There are local schemes for inter-library loans. These include the Sheffield Interchange Organization (SINTO), the Co-operative, Industrial, and Commercial Reference and Information Service (CICRIS) in West London, and the Liverpool and District Scientific, Industrial, and Research Library Council (LADSIRLAC). All these regional services are extremely active (5).

6.3 Union catalogues[1]

The use of periodicals, particularly the speeding up of loans, has its answer primarily in the production of union lists and catalogues. A Unesco conference, held in November 1950, included among its recommendations that of fostering the development of union catalogues, and Dr Brummel, Director of the Royal Library of the Netherlands, was commissioned to make a report on their problems and organization. This valuable report was published in 1956 (6). The final chapter deals with publication—the difficulties of complete publication but the usefulness of partial catalogues and especially of union lists of periodicals. The value of small-scale union lists is emphasized by Nettie A. Mehne (7), who describes the production of a union list of 1,936 serials in Michigan which was also produced on cards by the Multilith process so that it could be kept up-to-date. The various subject groups within the Aslib membership and the regional groups of the Library Association have either published or have plans for union catalogues among their projected schemes for closer co-operation. Many libraries have taken the initiative and organized their own union catalogues; the Tavistock Institute of Human Relations, for instance, maintains a union catalogue of socio-psychological periodicals held by libraries in the London area.

A survey of the contents and scope of some important catalogues, union lists and bibliographies of periodicals published in the British Commonwealth and the United States since 1945 was made by H. Margaret Gummer in 1956 (8). This was supplemented in 1958 by Muriel Hammond's survey of some foreign guides for the same period (9) and followed by C. Björkbom's supplementary list of Swedish catalogues and bibliographies in 1959 (10). All authors avoid a critical assessment of the value of each work; each has been compiled with a special purpose in view and in many cases the limitation of funds has been taken into consideration when measuring the standards it has been possible to achieve.

[1] Acknowledgement is made to the Library Association for kind permission to use material for this section, and elsewhere in the text, from the author's chapter on 'Periodicals: their acquisition and use in libraries', in *Five years' work in librarianship, 1956–60*. London, Library Association, 1963, pp. 357–73.

The Sheffield Public Libraries, however, were one of the pioneers in this field when, in 1932, they initiated a union catalogue of scientific and technical periodicals in the Sheffield area as part of a co-operative scheme (11). The first venture was the *List of the current scientific serial publications received by the principal libraries of Manchester* in 1898.

The problem has been tackled on a national scale by the initiation of the *British union catalogue of periodicals* (BUCOP). This catalogue owes its origins to the proposals submitted by Mr Theodore Besterman at the 1942 Aslib Conference. Aslib formed a special committee to give full consideration to Mr Besterman's proposals, under the Chairmanship of the late Mr L. Newcombe, then librarian of the National Central Library, and an appeal was made to the Rockefeller Foundation, which resulted in an appropriation, spread over a number of years, for editing this work. A special Council was appointed to administer this undertaking, and work on BUCOP, as it is more commonly known, commenced on 1st April 1944. Economic pressures were among the difficulties encountered in its production, and when the Rockefeller grant came to an end in 1956, publication became dependent on advanced royalties from the publishers. The first volume of this monumental work appeared in 1955 and the remaining three volumes in 1956, 1957 and 1958. In 1958 the Nuffield Foundation made a grant so that work could be continued on a supplementary volume. This volume, *Supplement to 1960*, was published in 1962 and includes all periodicals new since around 1950 as well as material additional to the four volumes already published. With the completion of this volume, the work for which the Council was constituted came to an end. From January 1962, the responsibility for the continuation of the work was assumed by the National Central Library.

The original four-volume set of the *British union catalogue of periodicals* (BUCOP) with its supplement is an alphabetical catalogue of the titles of over 140,000 periodicals held by 400 libraries in Great Britain. The period covered is from the beginnings to 1960. The fourth edition of the *World list of scientific periodicals* covers the years 1900 to 1960 and after the publication of this edition its Council decided to merge with BUCOP. This means that the National Central Library's

Periodicals Union Catalogue becomes the major reporting centre for libraries co-operating in national union schemes for periodicals and serials. It has to serve two purposes: as a tool in handling applications for inter-library loans and as the source from which BUCOP's entries are drawn. In consequence, the NCL's catalogue is in the process of revision so as to conform to BUCOP's principles of entry and arrangement.

BUCOP's editor, K. I. Porter, has outlined the purpose of the new publication which is taking 1960 as its departure point 'although the first issues reflect our intention to list the most recent information available that could usefully be published. Thus the initial issue will contain titles pertaining to the years 1963 and 1962. The subtitle of the work, "New periodical titles", signifies that new publications will be listed together with new entries for changed titles. To make a complete record of changes in the status of existing serials we shall also list titles which are known to have ceased publication without a successor. Four issues of BUCOP will be published during each year, all of which will be superseded by an amended annual cumulation. A separate annual volume will be published which cumulates the scientific and technical serials that have appeared in the previous four issues, in effect continuing the *World list*. The annual issues will themselves be eventually cumulated, probably into quinquennial volumes. The "backlog" of titles for the years 1960 and 1961 will be published, either as a separate volume or as part of the first "cumulation of cumulations". Each issue, and the cumulations, will be divided into two principal sections: a main entry sequence of titles, followed by an Appendix of bodies responsible for the publications in the foregoing section, with the titles issued by each of them' (12).

It should be noted that BUCOP does not pretend to be a complete catalogue of periodicals in any particular library. For instance, it is considered unnecessary to load the entries of commonly held periodicals with fragmentary sets and, in the case of special libraries, emphasis is directed towards the holdings of special materials.

Early in 1957 the Rockefeller Foundation made a grant of $6,000,000 to the Library of Congress for the development of a permanent programme for the *Union list of serials* (13). This American equivalent has been surpassed in size by BUCOP, but

if the plans outlined come to fruition it will list some 500,000 titles (including special materials such as newspapers, which would be listed separately).

Andrew Osborn has described this union list as follows: 'As is commonly the case in serial work, the term "serials" is employed in a loose sense in the title of this work. Actually the *Union List of Serials* includes little more than periodicals, periodical-type publications of societies and institutions and numbered monograph series. . . . Its outstanding accomplishment is to be found in its successful recording of the holdings of more than 110,000 titles in Canadian and American libraries. . . . The second edition of the *Union List of Serials* is vastly more reliable than the first, but even so the work must not be taken as a definitive bibliography. A comparison of entries in the two editions will show abundant occasions on which pronouncements, thought in the first edition to be final, were revised in the second; and there are numerous entries in the second edition that could be revised were more information forthcoming. But this does not detract from the immense contribution to research the *Union List of Serials* has made. It is simply recognition of the fact that it should be regarded at all times as a working list based on actual holdings. As such it is a magnificent achievement, worth all the effort and cost its compilation entailed' (14).

The reprinting of the main volume of the second edition of the *Union List of Serials* is provided for in the new project. There will be no third edition as such, but the programme will dovetail with the publication of *New serial titles* and will become the responsibility of the Library of Congress. A feature of the project is the collection of locations for much material which would only appear in subsidiary lists confined to special subjects, forms or regions and which can be prepared from punched cards.

The fourth edition of the *World list of scientific periodicals* is published in three volumes and covers the scientific, technical and medical periodicals published between 1900 and 1960. Entries for over 300 libraries are included and the number of titles of periodicals listed is over 60,000. Periodicals held by the National Lending Library for Science and Technology have been covered as fully as possible. The first edition of this work

was published in 1925, the second in 1934 and the third in 1952. The decision of the Council of this pioneer work to merge with BUCOP is undoubtedly wise. As already stated, the list will in effect be continued through the publication of annual supplements of BUCOP. It must be admitted, however, that BUCOP is lacking in the qualities of speed and simplicity so desirable in location catalogues. Inevitably the method of entry under the earliest known title has evoked comparison with the arrangement of the *World list* which enters under the latest known title; it is also felt that the *World list* system of title abbreviations should be continued in some form in the new publication. (The abbreviations in the fourth edition of the *World list* have been prepared in general accordance with the forthcoming *British Standard for the Abbreviation of Titles of Periodicals* but does not show very great differences from the abbreviations given in previous editions.) BUCOP'S editor, however, has already stated the problems (15).

The Standing Conference of National and University Libraries (SCONUL) commenced publication in November 1956 of a regular *Foreign periodicals bulletin* which lists titles available for loan and which are not already listed in BUCOP or the *World list*. Similarly, the Standing Conference of Librarians of the Libraries of the University of London (SCOLLUL) issued a *Union list of periodicals* in 1957 to facilitate library co-operation until the first supplementary volume to BUCOP is published. This has been brought up-to-date by the publication in 1960 of a *Select list of periodicals newly received by colleges, schools and institutes of the University of London, 1950–1959*. This does not include all entries in the previous edition and the general principle has been to exclude those periodicals which a particular library might be expected to take in favour of the unexpected holding.

Other union catalogues of a national character include those inaugurated by the National Central Library and financed by a special grant from H.M. Treasury to cover Russian and German periodicals available in this country. A location index to war issues of European scientific journals can be consulted at Aslib, whilst a second index covering Russian periodicals has also been completed by Aslib with the help of the British Council; they are only available in card form. In Appendix IV

a selection of union catalogues and library catalogues of periodical holdings published in this country have been listed.

Unfortunately, with the exception of those published since the war, not all these catalogues are available for purchase and consequently have to be consulted at the various reference libraries, often impracticable for libraries in outlying districts. Many of these libraries will answer a telephone enquiry, however, and the information department of Aslib will do its best to answer enquiries of this nature from its members. Many libraries issue mimeographed lists of their periodical holdings from time to time and these should be exchanged whenever possible for those of libraries with related interests. A good collection of these lists is held by Aslib. The accessions lists of other libraries should also be watched for new periodicals they receive and, if possible, used to form a location index within the library. It is often the newest periodicals which are the most difficult to locate and borrow. Even if they cannot be borrowed the location index can at least indicate whether it is a periodical available for reference in this country. The problem of locating difficult periodical references is dealt with in Chapter IX.

6.4 Loan records and forms

(*a*) Periodicals held by the library

In visible indexes where a composite record is maintained the problem of recording loans is solved by the use of another auxiliary card. This is usually similar to that used for circulation purposes, a series of columns across a page. The columns contain spaces for the borrowers' name, the issue lent and the dates on which it was lent and returned, together with an extra column which may be used for remarks or the date the periodical is due to be returned (illustration 16).

This form can be used equally well in a vertical card record if the practice of having a separate loan card for the title of each periodical is followed. J. E. Wright, in his *Manual of special library technique* (Aslib, 2nd ed., 1946), has devoted a whole chapter to the recording of loans using vertical cards, which readers are strongly recommended to consult. In general, practices are very similar to those adopted for recording the loan of books.

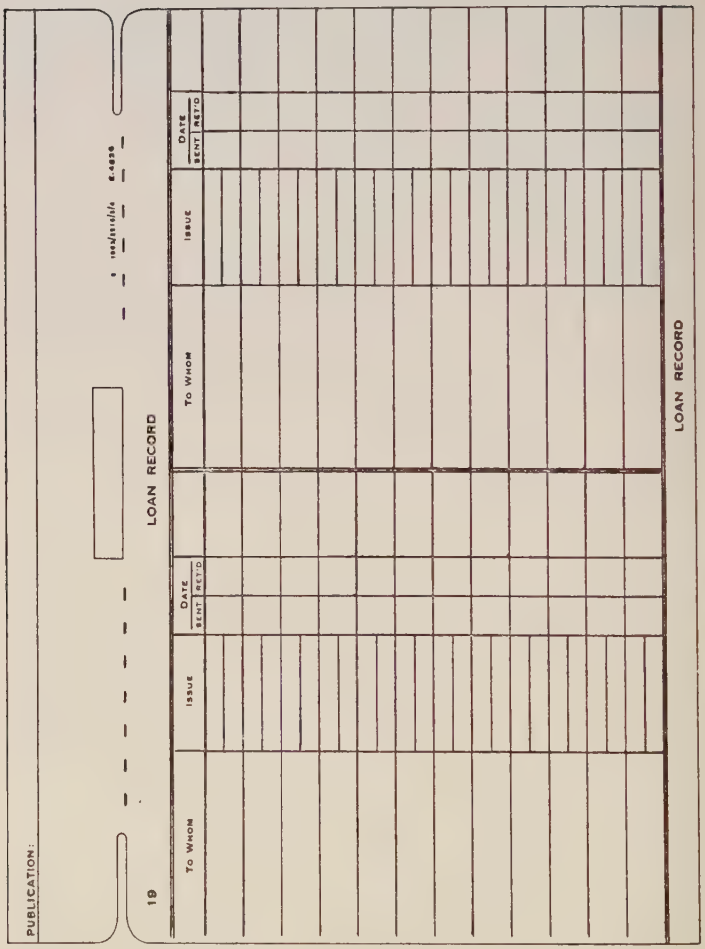

Illustration 16.—Loan record (auxiliary card in visible record)
(*By courtesy of Miss Ruth Jacobs*)

Mr D. V. Arnold, the librarian of Imperial Chemical Industries, Paints Division Library, has described the system in use in his library as follows (16):

'For the loan of periodicals special forms are filled in by the reader, one of these being filed behind a date guide and the other in order of the "P" (shelf) number of the periodical in a special drawer kept for periodical loans. These loan forms have another function, in that blocks of them are made available throughout the various departments and factories of the Division, and by filling them in and sending them to the library, a reader can ask for the loan of any required item. Gummed printed slips, having columns for the name of borrower, pages to which he is referred, and date for return, are fixed to nearly all documents (other than books) when first received in the library. This dispenses with the need for covering notes to be continually made out as a document passes backwards and forwards on loan.'

I.C.I. PAINTS DIVISION LIBRARY		
Sent to	See page	Please return by

(*b*) Periodicals borrowed from other libraries

Mr Arnold also gives a description of the methods adopted in his library for dealing with external loans:

'Many libraries from which books, etc., are borrowed, supply their own requisition forms, e.g. the Science Museum Library, but for those that do not do so, use is made of a specially printed form which is made out in triplicate. The top copy is sent to the outside library, the second is filed in order of the requisition number, and the third is filed in an alphabetical sequence of readers for whom books, etc., are being borrowed. This "reader's" copy, of an external loan requisition, is made out for every external loan negotiated by the Division library and has been found to be of great value, especially when enquiries are made by readers as to the progress of a loan requested by them.

'When the document is received from the outside library, details are entered in a diary for the day in which it has to be returned, and the "reader's" copy of the loan requisition form is extracted from the file and attached to the document. On it is written the date by which it must be returned to the Division library. The form provides a notification to the reader, without any further work on the part of the library staff, of the exact item requested, e.g. in the case of a periodical obtained on loan, a reference is given to the particular pages required. On the "reader's" copy space is provided for the borrower to write an abstract of the document or to indicate parts which he wishes to be photographed. Although there is no compulsion on a reader to make an abstract, the majority of readers do so, and information is thus often obtained as to the value that the work has been to the reader. This acts as a guide to the library with regard to the need for purchasing a copy. By subsequently filing the "reader's" copies under subject and adding author cards (of a distinguishing pink colour) in the main author catalogue, a subject and author record of the loan can be made if desired.'

It is recommended to use a register or ledger for recording external loans. By using two pages the following information can be posted to form a complete history of a loan:

Serial No.	*Date*	*Requestor*	*Publication*	*Requested from*	*Date rec'd*	*Lending library*	*Date ret'd*	*Postage*
1	2/1/51	Mr Smith	*Jnl Doc.*, Sept. 1950	N.C.L.	5/1/51	Aslib	18/1/51	10*d.*
2	3/1/51	Mr Brown	*Nature*, Aug. 13, 1948	Science Library	5/1/51	—	10/1/51	5*d.*

Details of the publication required should be given in more detail than is given in the above examples. When requesting loans from other libraries, periodical references should be given in full, e.g. title of periodical, volume number, part number, date, pagination, and the author and title of the article required.

The inter-library loan services and the lending libraries should not be subjected to a lot of unnecessary work in dealing with requests which are passed on which have no bibliographical checking at all. A great deal of the delays in lending services can be attributed to incomplete or misleading references, a problem which is discussed in Chapter IX.

When an application is made direct to a library with which there are no reciprocal arrangements, it may prove more tactful to make the original request by letter. Requisition forms or duplicated form letters may be used for established contacts. For the convenience of the lending library it is a courteous gesture to enclose a form letter or postcard for a reply; the enclosure of a self-addressed label is also often welcome. The wording of these form letters may be on the following lines:

LOAN REQUEST

Dear Sir,

It would be much appreciated if you would kindly lend the under-mentioned publication to us for a short time.

For your convenience in replying, a label and a duplicate form are enclosed.

Please quote our reference number in any correspondence regarding this loan.

Reference No.

Date

To:

Yours faithfully,

for Librarian.

The reference number in each case should be the serial number entered in the register, which can then be consulted for the history of the loan. Since reference numbers are notorious for being omitted, however, a wise precaution is to file a slip bearing the title and issue of the periodical requested and the serial number behind a guide entitled 'Direct Applications' in the vertical loan record. The library's copy of the requisition forms supplied by the National Central Library and the Science Museum Library can be kept separately behind appropriate guide cards. The forms can be arranged in alphabetical order according to the title of the periodical requested, and the serial

number of the loan and for whom it is intended can be written either on the reverse or at the bottom of the form. If preferred, all external loan slips can be filed in a single alphabetical sequence.

REPORT ON REQUEST FOR LOAN

PLEASE RETURN THIS DUPLICATE TO:

(Address of applicant)

The material which you requested below (mark item which applies):

1. Is being SENT HEREWITH, and should be returned by.....
2. Is NOT being sent for the following reason(s):

Reference incomplete, lacks	Cannot lend.
	On loan, available in..... week/days.
Title not in library.	Your name has been added
Part not in library	to the waiting list.
	Please apply again.
	Reference No.
	Date

FROM:

When the borrowed publication is received in the library, it may be regarded temporarily as library property and its subsequent loan recorded in normal loan records. A different coloured slip may be used to distinguish it from the usual loan slips. If desired, a further coloured slip may be used to indicate loans made to other libraries either direct or through the inter-library lending services. It is the usual practice of the lending library to enclose a receipt form to be signed and returned with a refund of the postage upon receipt of a publication. The lending library can file this receipt together with the loan slip and return it to the borrowing library following the completion of the loan.

When returning the publication to the lending library it is courteous to enclose a 'thank you' slip bearing the name of the borrowing library in order to assist the tracing of the loan. Requests for an extension of the loan should be made at a reas-

onable period before it becomes due. It should be unnecessary to add that all periodicals borrowed from other libraries should receive the greatest care and be adequately packed when being returned.

The loan record after use can be used in the compilation of a location index (see p. 167).

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(13) Joint Committee on the Union List of Serials. A permanent program for the *Union list of serials*. Washington, Library of Congress for the Committee, 1957. vi, 30 pp.
(14) Osborn, Andrew D. *op. cit.* p. 281.
(15) Porter, K. I. *Op. cit.* pp. 189–99.
(16) Arnold, D. V. Routine in a library devoted to the literature of paint technology. *Library Association record*, vol. 49, no. 10, October 1947, pp. 244–7.

CHAPTER VII

BIBLIOGRAPHIC ARRANGEMENT AND LISTING OF TITLES

7.1 Form of entry

Consistency of treatment in the bibliographic arrangement or form of entry of the titles in the periodical records is important, since, apart from facilitating the consultation of the records, the method adopted should also be followed when compiling any list of the periodical contents of a library. These lists are usually compiled for display in the reading room or for distribution to other libraries or the compilers of union catalogues. In the case of small libraries they are usually mimeographed, but the larger libraries have them printed and, for want of a better term, they are called 'handlists'.

These 'handlists' are not to be confused with catalogues, just as the bibliographic arrangement of titles should not be confused with cataloguing. A catalogue has a more comprehensive objective than a list of titles, and the compilation of a 'handlist' or the arrangement of a record need not be governed by the conditions which govern the cataloguing of periodicals. The compiler of any list of periodicals, however, should bear in mind the person who is going to use it, particularly as it often serves as a key to the shelf arrangement. It is essential to obtain consistency of treatment, with the minimum of cross-references. But this consistency of treatment, although existing in individual lists and records, is unco-ordinated generally, and the result in this country particularly has been the publication of various union catalogues and handlists with varying forms of entry. This chaos in periodical and serial documentation is very much in evidence in Dr D. J. Urquhart's description of the Science Museum Library's former Supplementary Lending Scheme: 'The nerve centre of this Supplementary Lending Scheme is a catalogue made by cutting up and dry-mounting on 8 in. × 5 in. cards lists of holdings and accession lists of the participating organizations. The fundamental philosophy be-

hind this union catalogue is that, in this era of man-power shortage, the maximum use must be made of existing lists and, as a result, this catalogue conforms exactly to no recognized code. As, however, requests from borrowers are also inclined to no recognized method of describing publications, this is not entirely a disadvantage' (1).

The main cause of contention, however, in the listing of periodicals and the form of entry in the records, is whether the publications of a society, institution or office should be entered under the name of the issuing bodies or preceded by their geographical location or entered under the title as given on the title page. As a rule, there is little diversity in the treatment of 'independent' periodicals which usually enjoy a distinctive title.

Properly to appreciate this contention it is necessary to bear in mind the following rules of the Joint Code, and that the term 'periodical' is more commonly used in the sense of the term 'serial' as defined in the Joint Code:

CORPORATE BODIES AS AUTHORS
GOVERNMENT PUBLICATIONS

Specification. Governments (states, provinces, municipalities, ecclesiastical, military, or judicial districts) are to be considered as authors of their official publications.

58. *General rule.* Enter under names of countries, states, cities, towns, etc., official publications issued by them or under their auspices. The names of the departments, bureaux, etc., from which the publications emanate are to be given as subheadings. . . .

59. *Bureaux or offices subordinate to a department.* Enter government bureaux or offices subordinate to a department directly under the country, not as subheadings under the department. . . .

. . . Many libraries prefer to invert the name of the department, etc., e.g. United States. *Education, Bureau of*; Massachusetts. *Agriculture, State board of.* . . .

Still another form has been adopted in Bowker's 'State publications', *viz.:*

New Hampshire. [*Agriculture*] *Board of agriculture.*
Vermont. [*Insane*] *Supervisors of the insane.*

A fourth plan which offers advantages, particularly for a printed card catalog, is to print the distinctive word or words of the subheading in a special type (e.g. gothic). This affords a choice as to arrangement (under first word or under catchword) without requiring any changes in the heading.

United States. *Bureau of* education.

. . . .

SOCIETIES

Specification. This includes associations and societies of all kinds, scientific, benevolent, moral, etc., even when strictly local or named from a country, state, county, or province, also clubs, gilds, orders of knighthood, secret societies, inter-collegiate societies, Greek letter fraternities, Young men's and Young women's Christian associations, affiliated societies, political parties, religious sects, etc., as distinguished from institutions (establishments).

72. *General rule.* Enter a society under the first word (not an article) of its corporate name, with reference from any other name by which it is known, especially from the name of the place where its headquarters are established. . . .

Alternative: Enter all societies whose names include that of some locality indicating the home of the society or the territorial limits of its researches, or both, under the name of that locality. Societies whose names do not include that of some locality are to be entered under their names.

INSTITUTIONS (ESTABLISHMENTS)

Specification. This includes colleges, universities, schools, libraries, mercantile libraries, museums, galleries, observatories, laboratories, churches, monasteries, convents, hospitals, asylums, prisons, theatres, chambers of commerce, botanical and zoological gardens, buildings, etc.

82. *General rule.* Enter an institution under the name of the place in which it is located. . . .

Exceptions and special rules for particular classes of institutions.

83. *Institutions whose names begin with a proper noun or adjective.* Enter an institution whose name begins with a proper noun or adjective under the first word of its name, and refer from the place where it is located.

Two modifications of this rule have been suggested:

1. To extend the rule to include all institutions whose names are *distinctive.*

2. To limit the scope of the rule by making it apply only to institutions of the British Empire and the United States; foreign institutions would, therefore, be entered under the place even if their names begin with a proper noun or adjective.

TITLE ENTRY

121. *Periodicals.* Enter a periodical under the first word of the title, not an article. . . .

If a periodical has changed its name enter it under the earliest form with brief entries under the later forms.

A regular periodical issued by a society or an institution is ordinarily to be entered under its title, especially if this is distinctive in character. When, however, the successive parts appear at long intervals—annually, bienially, etc.—or when the publication contains only the regular proceedings, transactions, and annual reports of the society, it is to be entered under

the names of the latter, with added entry or reference under the title if it is distinctive. In doubtful cases entry under the society is preferred.

AMERICAN LIBRARY ASSOCIATION RULE: If a periodical has changed its name, enter it under the latest form. Make brief entries under the earlier names, referring to those which immediately precede and follow in a note introduced by the phrase 'preceded by' or 'continued as'. If the change in name is slight, a reference will suffice in place of the brief entry.

The above rules were also cited by the late Mr Ernest Lancaster-Jones in a paper read before the British Society for International Bibliography (2) as a basis for compiling lists of titles in alphabetical sequence. A study of these rules led him to the conclusion that no one system is adapted to the full range of titles of periodicals issued by corporate bodies and . . . 'If an objective in compiling a list of periodicals is to arrange them under the most definite elements of their titles, with the minimum of cross-references, it is probable that the following rules will in practice prove best adapted to the purpose:

(1) Enter distinctive titles under the titles, giving cross-references to issuing bodies, if any, only where these issue other periodicals included in the list; the latter is a recommended practice, but not essential.
(2) Enter titles necessarily involving the name of a society, institution, etc., but not involving the name of a locality, under the name of the society, etc.
(3) Enter titles necessarily involving the name of a locality under the locality. Include in this category all official titles, e.g. of government, state, etc., offices, and all titles of institutions or establishments necessarily located in distinct places.'

Examples:

(1) Advancement of science. [British Association]
Journal of documentation. [Aslib]
See also Aslib
(2) Aslib. Book-list
Aslib. Proceedings
See also Journal of documentation
British Astronomical Society. Journal
Unione Matematica Italiana. Bolletino
(3) Benares. Mathematical Society. Proceedings
Edinburgh. Royal Observatory. Astronomical observations
Great Britain. Ministry of Agriculture. Agriculture; journal of the Ministry of Agriculture.

Mr F. W. Gravell, formerly Librarian of the Patent Office Library, has presented a selection of periodicals lists held by the Patent Office Library, divided into the following three categories:

(*a*) Lists arranged according to the basic rule of 'the title as printed'.
(*b*) Lists arranged according to the basic rule of 'distinctive title, or name of society or institution'.
(*c*) Lists arranged according to basic rule of 'geographical location of society or institution' with distinctive title and/or society indexes (3).

The entry of a periodical published by an institution according to the three systems referred to above is shown in the following examples (4):

(*a*) Summary of Current Literature. British Cotton Industry Research Association.
(As listed in *World list of scientific periodicals.*)
(*b*) British Cotton Industry Research Association. Summary of Current Literature.
(As entered in *Union list of serials.*)
(*c*) Manchester. British Cotton Industry Research Association, Didsbury. Summary of Current Literature.
(As listed in *Handlist of short titles of current periodicals in the Science Library*, 5th ed.)

Mr Lancaster-Jones, in his paper, gives the following simple examples of these three distinct methods of arrangement:

Under the name of the publication:
Journal of the Chemical Society, London

Under the name of the society, etc.:
Chemical Society, London, Journal

Under the seat of the society:
London, Chemical Society, Journal

The first method, which is that adopted by most national lists, such as *Willings press guide*, works admirably if the *exact* title is known, but periodical references are notoriously inaccurate at times. Thus a reference beginning 'Bulletin of . . .' may refer to a periodical whose correct title may commence with 'Monthly Bulletin . . .' or 'Quarterly Bulletin of . . .'. The

incorrect spelling of foreign titles may also lead to confusion, e.g. Tidskrift instead of Tidsskrift or Tiddskrift.

The second method has similar objections. The names of societies often begin with vague qualifying words such as 'National', 'Royal', 'Incorporated' or 'Chartered' which are apt to be overlooked, whilst the indiscriminate use of 'Institute' instead of 'Institution', or vice versa, causes further confusion.

The main objection to the third method is that it involves a considerable number of cross-references from the actual names of the societies. If the seat of the society is unknown and a cross-reference is not given it may virtually be lost. On the other hand, a large proportion of cross-references adds to the size of the publication and irritates the reader. This system is obviously the best for government, state and municipal publications, however.

It is apparent from Mr Gravell's list that the first method is the most popular. It is worth noting, however, that in many Continental lists the practice is to invert any adjectival element in the title so as to make the substantive the dominant word in its arrangement; thus *Angewandte chemie* will be found under *Chemie, angewandte.*

Whatever form the entry takes it should show where a set begins, whether it is still in progress, whether the set is complete, and, if not, what volumes or parts are missing, thus:

Journal of experimental psychology, Princeton
1–15, 24– 1916–32, 1940–

Journal of general psychology, Worcester, Mass.
1– 1928–

Journal of neurology and psychiatry, Bristol
1–17, 1920–1937 (lacks 1, ii)

When the title of a periodical has been changed or amalgamated, the information regarding the series should be given under the most recent title, with cross-references from the changed or variant forms, as follows:

Occupational psychology [London] (*c*) *formerly* Journal of the National Institute of Industrial Psychology (*a*) *and* Human factor (*b*).
(*a*) 1–5, 1922–31; (*b*) 6–11, 1931–7; (*c*) 12– , 1938–

Mental health [London]. *Formed by the union of* Mental hygiene *and* Mental welfare (*qq.v.*).
1– , 1940–

Mental hygiene [London), 1–5, iv, 1929–39. *Afterwards incorporated in* Mental health [London] (*q.v.*).

Mental welfare [London] *formerly* Studies in mental inefficiency. *Afterwards incorporated in* Mental health, London (*q.v.*), 1–20, 1920–39.

Studies in mental inefficiency. *See* Mental welfare, *formerly* Studies in mental inefficiency.

Some libraries, however, find it more convenient to list the title under the earliest form, with cross-references from the latest.

There are also varying practices in the use of capitals in the listing of titles or periodicals. It is recommended, however, that the following rule from the Joint Code be used:

'172. *Capitals.* Initial capital letters are to be used for names of persons, personifications, places, and bodies, for substitutes for proper names, and for adjectives derived from these names; for the first word of the title of a book; in title entries (anonymous works, periodicals, etc.) for the second word of the title if the first is an article. In all doubtful cases avoid the use of capitals. In foreign languages follow the local practice.'

7.2 Alphabetical arrangement

Having determined the form of entry to be used, the question of the alphabetical arrangement of the titles must be considered, a task which is not as easy as is frequently supposed. Assuming that the form of entry is that given on the title page of the periodicals, the following alternative methods may be used:

(1) The 'All through' or 'Letter-by-letter' Order. This method has an apparent advantage in the flow of the alphabetical sequence, and bearing in mind that alphabetization is intended to minimize the demands on reasoning, is generally more popular. Its disadvantages are that the user does not often remember long titles exactly. The inadequacy of arrangement by first word has already been stressed in the previous section.

Example:

Annual reports of the Miners' Phthisis Board [Capetown].
Journal de psychologie normale et pathologique [Paris].
Journal für Psychologie und Neurologie [Leipzig].
Journal of psychological medicine and mental pathology [London].
Journal of the National Institute of Industrial Psychology [London].
Journal of the Royal Anthropological Institute [London].

Quarterly journal of experimental psychology [Cambridge].
Report. Industrial Health Research Board [London].
Special reports series. Medical Research Council [London].

(2) 'RECOMMENDED' ORDER, BY KEY OR FUNCTIONAL WORD, IGNORING ARTICLES, CONJUNCTIONS AND PREPOSITIONS AND CERTAIN OTHER WORDS. In this method the aim of the compiler should be to attempt to arrange the titles in order to bring into prominence the dominant elements which are usually embodied in the title itself. This is best explained by the following excerpts from the 'Notes on the use of the catalogue' following the preface to the *Union catalogue of the principal periodical publications in the university libraries of the British Isles* (London, National Central Library, 1937):

'The list is in one alphabet. Following the method adopted in the *World list of scientific periodicals*, unimportant words are ignored in deciding the alphabetical order. For example, articles and prepositions are passed over so that "Report on the experimental work" precedes "Report of Experiments"; the words "on the" and "of" being ignored and the catchwords being "experimental" and "experiments". To make the arrangement clear and to facilitate reference, the words which determine the alphabetical order are printed in heavy type in the main entries, and in order that main entries may stand out clearly no heavy type is used in cross-references.

'Besides articles, conjunctions and prepositions, certain other words which are subject to variation are also ignored in alphabetizing. The most important of these are:

'(*a*) "Annual" when it stands before "Report". This follows the example of the *World list*, and keeps "Reports" and "Annual Reports" together under the word "Report". The word "Annual" before "Report" is indicated by the abbreviation "A".

'(*b*) Descriptions of a country or territory, as Colony, Commonwealth, Dominion, State, etc., e.g. **"Report. Education Department**, Colony and Protectorate of **Kenya"** and **"Report** of the **Education Department,** State of **New York".**

'(*c*) Words such as "Imperial, kaiserlich, königlich, kürfürstlich, grossherzolich, royal" and their equivalents in other languages, which occur in the titles of societies and institutions but are not an essential part of the title. These are shortened to their initial letter and ignored, except when they form an

essential part of a title, when they are given in full and used in alphabetizing. For example, "**Jahrbuch** der k. **preussischen** Kunstsammlungen" and "**Mémoires** de l'**Académie** R. des **Sciences** morales" but "**Jahresbericht der königlichen Bibliothek** zu Berlin", "**Annuaire** de la **Bibliothèque royale** de Belgique", "**Memoirs** of the **Royal Society**".

'The plural form is disregarded in the alphabetical arrangement of a long sequence of entries containing the same word in varying forms, where it would often be difficult to remember whether the singular or plural form is used on the title page. The words are:

Abstract	Notice
Bericht	Pamphlet
Bulletin	Rapport
Circular	Rendiconto
Collection	Report
Compte rendu	Séance
Jahrbuch	Statistique
Memoria	Verhandlung
Monatsbericht	Verslag
Monograph	

'Archaic spelling, though retained, has been alphabetized as if it were modern, e.g. "Asiatick" as if it were "Asiatic", "newes" as if it were "news".

'In German words C has been alphabetized as K when it occurs before a, i or o (e.g. camera, cinema, commission, correspondenz), and as Z when it occurs before e (e.g. central), though the original spelling has been kept.

'The German "th" has been alphabetized as "t" (e.g. no distinction has been made between "Mitheilungen" and "Mitteilungen", "Thier" and "Tier").'

Under this arrangement the examples given previously would appear thus:

Journal of the **National Institute** of **Industrial Psychology,** London.
Journal of **psychological medicine** and **mental pathology,** London.
Journal für **Psychologie** und **Neurologie,** Leipzig.
Journal de **psychologie normale** et **pathologique,** Paris.
Journal of the **Royal Athropological Institute,** London.
Quarterly journal of **experimental psychology,** Cambridge.
Report. Industrial Health Research Board, London.
A. **Report** of the **Miners' Phthisis Board,** Capetown.
Special reports series. **Medical Research Council,** London.

If the form of entry is to follow the basic rule of 'distinctive title, or name of society or institution', the arrangement would be thus:

Great Britain. Industrial Health Research Board, London. Report.
Great Britain. Medical Research Council, London. Special reports series.
Journal de psychologie normale et pathologique, Paris.
Journal für Psychologie und Neurologie, Leipzig.
Journal of psychological medicine and mental pathology, London.
National Institute of Industrial Psychology, London. Journal.
Quarterly journal of experimental psychology, Cambridge.
Royal Anthropological Institute, London. Journal.
Union of South Africa. Miners' Phthisis Board, Capetown. Annual reports.
or
South Africa, Union of, Miners' . . .

This method follows Mr Lancaster-Jones's recommendations and is similar to that adopted by the *Union list of serials* (2nd ed., New York, H. W. Wilson, 1943), which also includes adequate cross-references. The following explanation is given in the introduction to the *Union list*:

'A serial not published by a society or a public office is entered under the first word, not an article, of the latest form of the title.

'A serial published by a society, but having a distinctive title, is entered under the title with reference from the name of the society.

'The journals, transactions, proceedings, etc., of a society are entered under the first word, not an article, of the latest form of the name of the society.

'Learned societies and academies of Europe, other than English, with names beginning with an adjective denoting royal privilege, are entered under the first word following the adjective. These adjectives, kaiserlich, königlich, reale, imperiale, etc., are abbreviated to K, R, I, etc., and are disregarded in the alphabetical arrangement.

'Colleges and universities having a geographical designation are entered under the name of the city, state, or country included in the title.

'Observatories, botanical and zoological gardens, etc., not having a distinctive name, are entered under the name of the

place in which they are located, unless they are affiliated with a university, in which case they are entered under the name of the university.'

Lists arranged according to the basic rule of 'geographical location of society or institution', and following the rules of the joint-code, will appear thus:

Berlin. Universität. Neuro-biologisches Institut; Kaiser Wilhelm-Institut für Hirnforschung. *Journal für Psychologie und Neurologie*, Leipzig.
Great Britain. Privy Council. Medical Research Board. Industrial Health Research Board. *Report*.
Great Britain. Privy Council. Medical Research Board. *Special reports series*.
Journal de psychologie normale et pathologique, Paris.
Journal of psychological medicine and mental pathology, London.
London. National Institute of Industrial Psychology, *Journal*.
London. Royal Anthropological Institute, *Journal*.
Quarterly journal of experimental psychology, Cambridge.
South Africa. Department of Mines and Industries. Miners' Phthisis Board, Capetown. *Annual reports*.

This method automatically assumes the proportions of cataloguing, the dominant features of which are 'author' and 'locality'; a comprehensive system of cross-references must automatically follow if a publication is to be traced in a hand-list with any ease.

The *A.L.A. Rules for filing catalog cards* (Chicago, American Library Association, 1942) includes the following for distinctive titles:

'Rule 37 *Title arrangement*

. . . .'

(*c*) Arrange periodical and newspaper titles by the main part of the title, disregarding the explanatory sub-title following a semicolon or comma, since this is not familiarly known as part of the title.

ASIA
Asia; journal of the American Asiatic association.
Asia, an economic and regional geography.
Asia and Europe.
Motor; the national monthly.
Motor age.
Motor world.

(*d*) Periodicals of the same title are arranged first by the place of publication and then by the date. The sub-title may be regarded if needed to distinguish between titles.

International review, an illustrated monthly journal. La Crosse, Michigan.
International review, London, 1889.
International review, London, 1913.
International review, N.Y.
International review, Zurich.

(*e*) A periodical title used as an author entry is arranged after the entry of the periodical itself.

Power [a magazine]
Power
the second Power kink book
Power [title of a book by Lucke]
Review of reviews; monthly
Review of reviews
150 years ago
Review of reviews
Pittsburgh; a new great city

The above, of course, applies to entries in the main library catalogue which should include the library's periodical holdings.

This same set of rules also includes several others applicable to the listing of periodicals which should be consulted. These deal with modified letters (umlaut, special letters); signs and symbols; initials; abbreviations; elisions; words spelled in two ways; hyphened and compound words, etc. Similar rules are contained in the British Standards Institution's *Alphabetical arrangement* (London, B.S.I., 1951, pp. 12 [B.S. 1749: 1951]). The code of rules and definitions for the *British Union Catalogue of Periodicals* (5) obviously has an interest beyond its immediate purpose and should also be studied. Dr S. R. Ranganathan (6) has made a plea for a standard practice for alphabetical arrangement and lists the principal factors which most complicate a seemingly simple task.

7.3 Transliteration

It is generally recognized that the titles of periodicals published in non-Roman characters should be transliterated when included in any handlist. The *World list* is an exception to this

rule, although the abbreviations following the titles in this catalogue are given in Roman characters. A catalogue or list of periodicals is not a learned treatise intended for special scholars and the object of transliterating or transcribing foreign alphabets is to assist the uninitiated user. Various systems of transcription have been devised, and those most familiar to librarians are included as an appendix to the cataloguing rules compiled by the Library Association and the American Library Association. This includes systems for the transliteration of the Semitic, Cyrillic or Slav languages, and Sanskrit. The acquisition of periodicals in the Semitic languages and Sanskrit is confined to a few special libraries which have specially trained staff to deal with them. Since the war, however, a considerable increase has occurred in the acquisition of Russian literature by British libraries, particularly in the fields of science and technology. This has made some standard form of transliteration for Cyrillic characters imperative. Apart from the system recommended in the Joint Code, other systems have been devised which have created a variety of practices. For example, there are at least three variants—Czar, Tsar and Tzar for the Russian word Царь. These varying systems have been summarized and explained in an article by the late Professor W. K. Mathews, which also contains an excellent bibliography on the subject (7). The International Standards Organization recommendation for *Transliteration of Cyrillic characters* was published as ISO/R9-1954 after years of work on a pre-war draft but, because of its relative abundance of diacritical marks, was found unacceptable by important interests in the U.S.A. and in Great Britain. This was mainly due to the fact that the Royal Society's Abstracting Consultative Committee and the British Academy had published a scheme in 1953 (8) which had been fairly widely adopted. The British Standards Institution, which had intended to endorse and publish the ISO system, had to modify their intention and publish a 'British' standard in 1958 (B.S. 2979: 1958) with both systems incorporated (9). The 'British' system is still strictly a transliteration but does less violence to established forms of names. The international system, however, is logical and economical despite the objections against its production of unfamiliar forms of familiar names. It will doubtless go on being used by international

organizations, in certain important branches of international communication and in many parts of the world where English has not been adopted. Most English-speaking librarians and bibliographers, however, will do doubt continue to use B.S. 2979 for all general purposes. Attempts are still being made, however, to resolve the basic differences between the two systems (10).

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(8) Royal Society. Abstracting Consultative Committee *and* the British Academy. The transliteration of Russian, Serbian and Bulgarian for bibliographical purposes. London, Royal Society, 1953. 12 pp., tables.
(9) British Standards Institution. British standard for transliteration of Cyrillic and Greek characters. The Institution, 1958. 23 pp. (B.S. 2979: 1958).
(10) Loman, D. Standardization in documentation. *Journal of documentation*, vol. 21, no. 1, March 1965, pp. 16–19.

CHAPTER VIII

DISPLAY, STORAGE, BINDING AND SHELVING

8.1 Display and storage

Most libraries display their current periodicals and the methods adopted for display are generally influenced by the amount of floor space available; some consider the method whereby the periodicals are laid out on tables is more wasteful of space than the practice of using a special rack. Special racks, however, pose difficulties for periodicals differing in format, particularly if the current intake is large.

The furniture for displaying periodicals varies a great deal and the choice of design, apart from the question of expense and the number of periodicals to be displayed, is also influenced by the layout of the library. For instance, some libraries have a separate reading room which also houses all their periodical literature; others allocate a certain amount of wall space in the general reading room to periodicals, whilst others are only able to make use of a table or a standard rack for the display of current issues only.

Since perhaps 80 per cent. of the use a periodical ever receives comes during the first year, the most useful arrangement is some system of shelving or racks in which a whole year's issues of periodical acquisitions can be kept together in the reading room. At the Royal Institute of British Architects Library, for instance, steel racks are used with the middle shelf replaced by a sloping one, so that back numbers can be stored on the horizontal shelves, and the current issues displayed on the sloping shelf at a convenient height for browsing. This type of equipment is admirable for a periodical reading room as it ensures that the current issues displayed can be evenly distributed around the room. In libraries where shelving space is at a premium, however, the sloping shelves may be dispensed with and the current numbers displayed in a special standard rack of the type which, by showing the top of each periodical,

reveals its title. The periodicals can be put into a protective cover with a front of transparent plastic to allow the distinctive cover of the periodical to be seen. An alternative method is that adopted by many public libraries of allocating each periodical title a number. A list of the periodical titles available, together with their number, is displayed in the library, usually in a 'stripdex' visible index panel. The periodical is placed in a protective cover bearing the appropriate number which fits into a rack with either horizontal or vertical 'pigeon holes' which have been numbered accordingly. The disadvantage of this system is that readers have to consult the list before being able to locate the periodical.

Mr Harry Stenmark, of Telefonaktiebolaget L. M. Ericsson library, has adapted a series of open shelves to accommodate back numbers as well as current numbers of periodicals. The periodicals are placed on a piece of Manila board bearing the title of the periodical on the outer edge. This is then placed on the shelf and used to withdraw the periodicals from the shelf. An argument against this system is that it leaves the periodicals unprotected, although a further piece of Manila could be placed on the top of each pile; this method could well be employed for the back issues of newspapers, the current issues of which are usually displayed in various types of racks according to the needs of the library. Equipment for the display of periodicals and newspapers, as well as shelving, is expensive and rarely obtainable immediately, except from second-hand dealers; it is wise, therefore, before evolving any ambitious schemes to consult the catalogues of the manufacturers and suppliers of office and library equipment to determine what furniture can be obtained.

There can be no set rule as to which periodicals should be retained in the reading room and which should be relegated to the stack room; each librarian has to make his own decision. Apart from the current volume of most of the periodical acquisitions, the complete sets of reference material, such as the indexing and abstracting journals, should be retained in the reading room if space allows.

The organization of the periodicals department of the University of London Library, including the shelving and location of material, has been described by Miss Gummer and

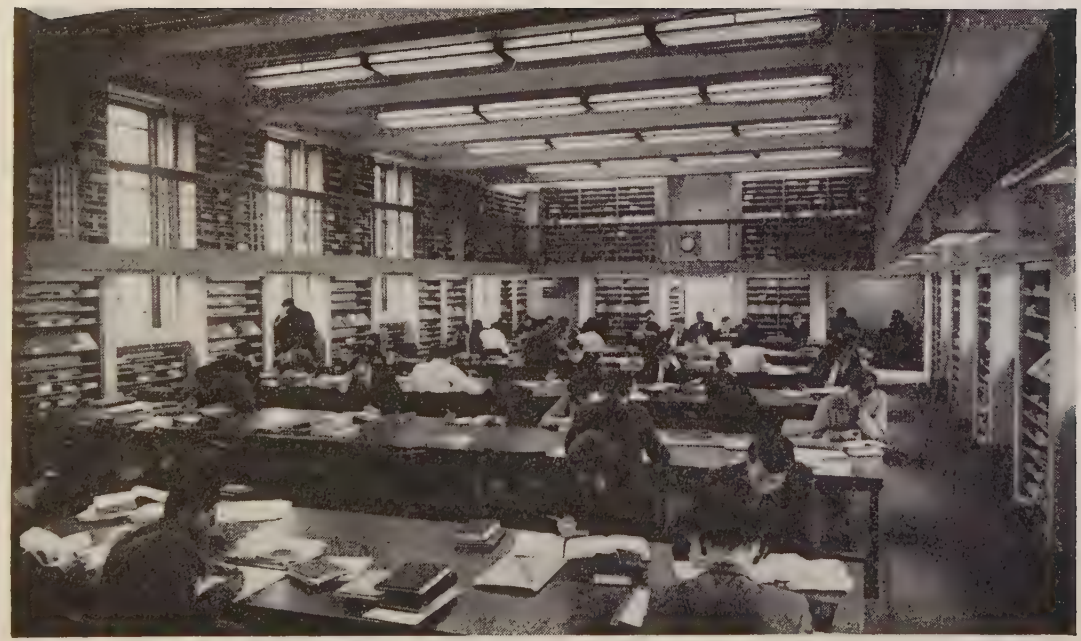


Illustration 17.—University of London Library, Periodicals Reading Room
(*By courtesy of Dr J. H. P. Pafford, Goldsmiths' Librarian, University of London*)

Raymond Catton (1). This description is of particular value to librarians contemplating any reorganization of their periodicals.

As stated in a previous chapter, some material must necessarily be disposed of, but there is still the problem of how to store the remaining material. The day will come when microcards, films and other mechanical recordings will be a practical proposition for all libraries and the problem of storage and how to protect the stock against the wear and tear of library use will be greatly reduced. There is an understandable reluctance on the part of readers to use these mechanical aids, but, despite this reluctance, it is a good policy to microfilm the newspaper collection if at all possible. Apart from their fragility and a tendency on the part of readers to clip them, they are extremely heavy and bulky when stored and take up a considerable amount of room. An essential acquisition in most libraries is a daily copy of *The Times*, microfilm copies of which can be purchased from Kodak, Ltd.

Unbound periodicals, other than the latest issue, may be kept in a variety of temporary binders. The book-form binder gives some likeness to a permanently bound volume whilst permitting the extraction of individual issues when required. When the covers are bent back the spine opens and grips the inserted journals. The strength of the clips holding the issues is such, however, that the volume is difficult to consult and the extraction and return of individual issues cannot be done quickly. Wire binders are of two types: the kind with continuous wires or strings (sometimes sheathed in plastic), which pass down the folds of the journals, and another kind with discontinuous wires which project into the centre of the journal from head to tail. These types are easier to consult, although insertion and extraction are not easy, particularly when the binder is full. Details of these and other methods will be found in G. M. Paterson's account of the Aslib exhibition held in 1960 (2).

Many libraries, however, prefer to use box-files for their unbound periodicals. These are available in a variety of designs; in metal, plain board, cloth-covered, with drop-down sides, with a flap-lid to form a tray or with a leather strap to facilitate pulling off the shelves. All have their merits and vary in price; they are familiar to most librarians and can be obtained

from most library and office equipment suppliers. Deep-lidded cardboard boxes or cases can be used equally well. A popular method of labelling box-files is to cut a piece from the cover of a journal bearing its title and paste it on the box, enabling it to be picked out easily. Both temporary binders and box-files can be kept with the bound volumes and usually house the duplicate or loan copies.

Specimen periodicals can be more easily consulted if filed in a vertical file cabinet, arranged either in alphabetical order of title or by form. For the periodical stack room, mobile storage units running on rails can be used to advantage in a small space; this is only practicable where a good floor is available.

D. E. Davinson, in the second edition of his book, *Periodicals*, has an excellent chapter on display, with some good plates (3).

8.2 Binding

The chief reason for binding periodicals is to ensure their preservation. When periodicals are put into circulation or suffer heavy wear, paper covers and pages are apt to become loose and ultimately lost if the volume is not bound. Unbound files are also difficult to keep in order and frequently parts can be mis-filed or lost. A definite binding policy should, therefore, be established for each title; there is no need to bind all the periodicals taken, but it is obviously advisable to bind those which are in constant use. What to bind and what not to bind can only be decided by the librarian himself, and apart from usage the decision should also be determined by the library's policy as to preservation and disposal. Binding is now a costly process and consequently the selection of material for binding should be carefully thought out and other local libraries consulted to avoid needless expenditure; as has already been stated, it is a questionable point whether neighbouring libraries should all store and bind copies of the same periodical.

The disadvantages of binding are that if postal loans are made then bound volumes are expensive to transmit, whilst a whole volume may be harder to replace if it gets lost. On the other hand, single copies are more easily lost or misplaced, particularly during internal loans. Single issues are thus con-

sidered more convenient for lending purposes but may disintegrate in time. The solution is, of course, duplicate copies if space permits, or photographic reproduction. Another disadvantage is that the periodicals to be bound may be absent from the library for inconveniently long periods. A good plan is to post each volume to the bindery as it is complete. If one or two volumes reach the binder at a time they may be given priority over large batches, whilst this policy also ensures that a large part of the material in demand is not away all at once and parts are not lost while waiting for other volumes to be completed.

One significant development has been bindings for individual copies. The Aslib exhibition of methods for the preservation and storage of periodicals held in May 1960 was of widespread interest (2). The protection of individual issues is important, particularly during circulation and loan: Manila and transparent plastic folders and methods of applying a protective plastic film directly on to the journal were demonstrated by fifteen different examples. Periodicals which are not of sufficient importance to bind permanently, but which nevertheless receive very heavy usage when they are current, may need some protection if they are to survive their period of usefulness.

R. M. Bunn, in the introduction to an article on the binding of periodicals in the National Lending Library (4) states: 'The binding policies for periodicals in the majority of libraries are very similar. In the main they are designed for libraries which are primarily reference libraries. Often the appearance on the shelf is the main consideration. In many cases the size of the bound volume is determined by the publisher and not by consideration of use, with the result that many libraries contain some monster volumes. The question of designing a periodical binding policy for a lending library has received very little consideration, possibly because the main lending libraries in the country—the public libraries—pay little attention to periodical material.

'When the National Lending Library for Science and Technology was being planned it was realized that a new sort of binding policy was necessary. This has to be considered at an early stage in the library's planning, in fact almost as soon as the first back runs of periodicals began to flow in.

'Several factors had to be taken into consideration:

1. The majority of the loans made from the library would be made from the periodical stock.
2. For use to be made of the library stock the literature would have to be sent through the post.
3. The availability of literature when required must be high, and if necessary, additional copies of titles must be bought to meet the demand.
4. Requests received would normally be for an individual article in a particular periodical.
5. If it is possible to predict the future demand on a periodical title if the previous demand is known.

'It therefore seemed reasonable that for those periodical titles which were heavily used a form of binding that could be applied to individual parts would be best for the library's purpose. This would have many advantages over the more traditionally bound volumes of periodicals. It would be more easily packed, as in most cases it would merely need to be placed in an envelope instead of being parcelled. Furthermore, this would reduce postage costs and permit many documents to be sent by letter post which is quicker as a rule than parcel post. It would also increase the availability of the stock, as for any required article only the particular issue would have to be sent from stock and the remainder of the volume would be available for other borrowers.'

Following trial, each individual part is bound in quarter cloth with cloth-lined card at the back and transparent plastic sheet in front, the inside of each joint (except for single sections issues) being lined with a strip of cloth matching the quarter cloth of the spine.

The author further explains, '. . . Because of the absence of any spine lettering, however, it was felt that the time to find a required part might be considerably increased and also that there might be a tendency to mis-shelve parts when replacing them after use. This difficulty was overcome by using different colours for the cloth bindings of the spines, according to the year of publication of the journal. This colour is the same for all titles in any particular year. A five-year colour cycle was introduced. As an added guard against misplacement of parts,

a diagonal line is drawn on the spine of the binding as soon as the volume is completed. This line starts at the bottom of the spine of the first binding in the volume and rises at an angle of 45° through all parts in the volume.

'Indexes which are published as separate issues are not single-issue bound. They are shelved unbound in an open-ended box at the beginning of the periodical run to which they refer. Subsequently they are bound together in a buckram volume in either five- or ten-year groups according to their size.'

It was found that the overall cost of the issue binding is not very much greater than the cost of binding the material in buckram volumes in the more traditional form. The advantages in packing and saving of postage are obvious, and in view of the fact the procedure adopted facilitates the flow of journals to the binders as well as readers, other libraries may be encouraged to adopt the experiment.

It is realized that single-issue binding is not suitable in certain cases owing to size or thickness; in these cases, the separate issues are bound in full cloth in the normal way, using the colour to match the spines of other single-issue bindings for that year.

Because the prime purpose of the library is to provide a postal loan service, two rules are followed in all volume binding:

1. All bindings must be such that the bound volume will open flat for photo-reproductions to be made.
2. No bound volume must weigh more than $2\frac{1}{2}$ lb. when binding is completed.

This may mean splitting the annual volume of a periodical bound in the traditional way in buckram, but the extra cost is felt to be necessary if the N.L.L. is to give a speedy and efficient loan service.

Periodicals should be bound in one of the following three ways, according to their use:

(1) Leather—for those heavily used. Leather is best when it is handled a lot as it benefits by the natural oils from the skin. Good leathers are expensive, but if not handled or treated with a preservative, they will deteriorate in time. Its use should therefore be confined to such expensive reference tools as *Chemical Abstracts.*

(2) Cotton-cloth or linen buckram—for general use. These do not perish so readily and are suitable for permanent filing of well-used material.

(3) Cotton-cloth or linen buckram with paper or board sides for those subject to even less wear and tear. This style is about two-thirds the cost of full binding and is adequate for periodicals infrequently handled, or which are to be shelved only for a term of years.

Permanent binding time for periodicals formed the subject of an investigation by the Aslib Research Department to ascertain how long it took special libraries in this country to get sets bound (5). The median time taken for 167 batches of binding sent by seventy-three libraries was seventy days. Ninety-one per cent. of the batches were away for more than one month. More than a quarter were away for more than three months. The results suggested that the service could be improved if libraries sent small batches and sent a greater proportion during autumn and winter. The answer, too, may be the system adopted by the National Lending Library of splitting annual volumes.

Yale Medical Library have decided that the binding of journals should be delayed until after the second year of publication to avoid removing them for binding during their time of heaviest use. Studies resulted in the conclusion that the unbound issues of moderately used journals do not disappear any more than other materials (6).

Binding is the one item in the library budget which must not be cut. There is no permanent economy in postponing binding; placing unbound periodicals on the shelves for any considerable time can result in serious loss and damage. Any suggestion that the binding should be curtailed should be fiercely resisted, particularly for titles that are regularly indexed.

David Moncur, of Dunn and Wilson, the well-known Falkirk bookbinders, has written on standards and developments in bookbinding (7). His paper is interesting in that it compares American standard binding with that in this country. Despite the fact that their mechanization has increased productivity tremendously, and binding charges in ratio to labour costs are the lowest in existence, he remains unsatisfied with the final product.

The selection of a bindery should not be entirely influenced by its proximity to the library nor by its speed of service. It is to the advantage of the library to choose a reliable bindery, as much time can be wasted by having to return volumes which have been incorrectly bound, and switching from one binder to another costs time in issuing fresh instructions. The librarian should make sure, therefore, that a binder to whom he entrusts his material meets the following requirements:

(1) Good workmanship.
(2) First-class materials used.
(3) Dependable service, i.e. that the material is retained for periods consistent with good work, with a minimum number of mistakes.
(4) Ability to follow instructions agreed upon, with few demands on the library staff in the preparation of the publications to be bound.
(5) Reasonable precautions taken against loss or damage to material during transit or whilst at the bindery.
(6) Reasonable charges, consistent with the above requirements.

The various library journals carry the advertisements of reputable binders, but if the librarian is not sure of his own judgment, the advice of one of the library associations should be sought or a reference obtained from another library for whom the bindery has done work. Care should be exercised in selecting from a classified telephone or other directory, particularly as many of those listed may not be equipped to undertake library binding. A list of firms who are members of the Library Binders' Section of the British Federation of Master Printers will be found in Appendix V. When approaching a binder for an estimate it is only fair to give him the fullest information possible regarding the number of volumes, parts, their sizes and condition.

When a periodical is prepared for the binder, the following steps should be taken:

(*a*) All issues should be examined to detect any damage, i.e. clippings, tears, and pencilled comments, etc. All defects should be noted.

(*b*) Each volume checked to see that no numbers are missing and then collated in proper sequence with consecutive pagination.

(*c*) If any supplements are included with different pagination the general practice is to place them with the issue with which they were published, although an alternative method is to place them at the end of a sequence.

(*d*) Make sure that the title page and index are included. The title page is placed at the beginning of a volume and the index at the end. Some publishers, however, begin the index on the reverse side of the title page, which leaves no alternative but to place the index at the beginning of a volume.

(*e*) Tie up volume with tape for despatch to the bindery. If two volumes are to be bound as one, they should be tied together and instructions accordingly entered on the binding slip. The use of string to tie up periodicals is apt to damage them. If, following collation, a set is found to be too incomplete to send immediately to the binder a different coloured tape may be used to distinguish it from those which are ready.

When a batch of periodicals is sent to the binder, danger of misunderstanding will be avoided if a typewritten list in duplicate is made of the titles, one copy being kept and the other forwarded to the binder. The library copy is for reference and checking against the volumes when they are returned. If no 'standing' instructions have been issued to the binder, a binding slip bearing the name of the library should accompany each volume. This slip should also record the title, how the volume is formed, inclusive dates, whether an index and title page is included, and where they should be placed, the kind and colour of the cover material to be used, lettering desired, and instructions regarding the placement of supplements and maps, and the discarding or retention of advertisements and covers. If two volumes are to be bound as one instructions should be given accordingly; if there are any missing pages or indexes this should also be stated and the binder instructed to put in stubs for future insertion, unless typed or photocopies are substituted. Incomplete volumes should not be sent to the bindery

with instructions to secure the missing parts; this is the responsibility of the library.

As an economy measure, some libraries have all their periodicals bound in the same manner; although saving time and thought for the bindery staff, this must considerably slow up the shelving and re-shelving of the periodicals and hinder the reference work of the library.

The titles on the spine of each volume should follow the form adopted by the library in its listing and for shelf arrangement. The abbreviation 'Vol.' need not be used, and if the date is within the calendar year, only the date without the months need be used. Where the inclusive months run into another year, the months as well as the years are used, thus:

SOCIAL STUDIES

29

1938

TRAVEL

71–72

May–April

1937–38

If a volume is a semi-annual it may appear thus:

READER'S DIGEST

33

July–December

1938

If a volume is too large to bind conveniently as one book it should be bound in two or three parts, depending on the size of the periodical. If this is done the inclusive months or date should be indicated on the spine, thus:

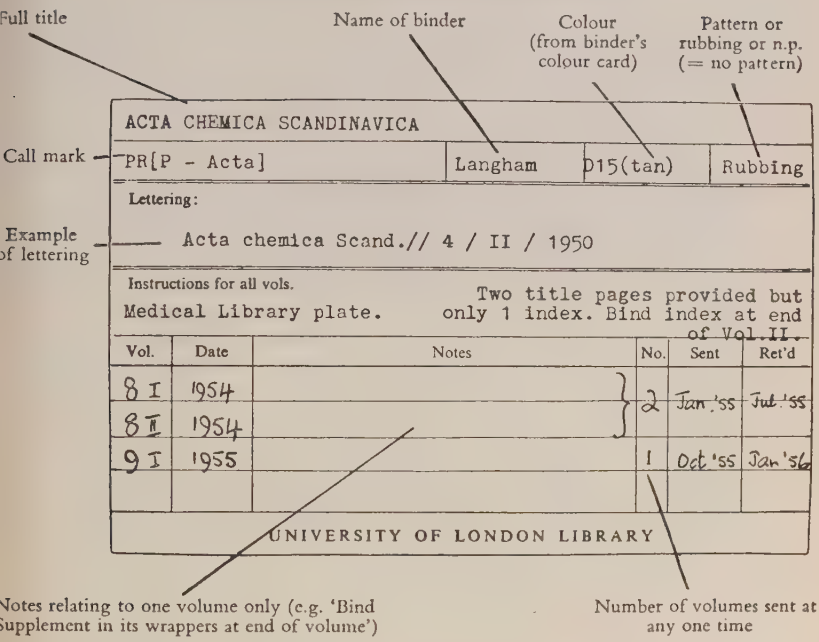
ILLUSTRATED LONDON NEWS
192
Part 2
October–December
1938

Before any periodicals are sent to the bindery, the binder should be notified of the impending shipment, the number of periodicals included, the number of containers, and the method of transportation. 'Standing' instructions as to materials, style of binding, the rendering of invoices and similar contract provisions should be agreed with the bindery and entered in the binding record.

Mary Robinson has described a permanent binding record for periodicals as used in the University of London Library; it is simple, and has much to commend it (8). By the provision of two identical cards (see illustration no. 18) for each title containing binding instructions (one of which is sent to the binders to refer to through all stages of handling) no typing of lists and other records are necessary.

If a periodical is not to be regularly bound, or belongs to a 'dead' set, or only needs repairing, two paper slips printed exactly like the cards and of the same size are used. The original is sent to the binder, and the carbon copy is filed with the cards in the binding file.

When a periodical returns from binding and has been checked and found correct, the binder's card is removed from the volume and the library's card from the binding file, and the two are filed away together in a separate index until they are needed again.



N.B. The back of the card is ruled to take eleven more volumes

Illustration 18.—Binding record
(*By courtesy of Mrs Mary Robinson*)

8.3 Shelving arrangement

There are several methods of shelving periodicals:

(1) Straight alphabetical arrangement according to 'title as printed'.
(2) Alphabetically, by main entry, according to the library's method of listing, with each part of a multi-title journal shelved under the title it bore when published, so that references can be looked up directly without referring to the list or catalogue.
(3) Classified by the same scheme as the books.

(4) Very broad subject classes, with alphabetical arrangement of the titles in each group.
(5) Form classes such as by language or type of periodical, i.e. house-journals, etc., or even by size.
(6) In numerical order, by allocating each periodical an arbitrary filing number.

From the readers' point of view the first method is the most popular. In a library covering a single subject field, most of the periodicals taken would receive the same class number and so there is no advantage in using this as the filing notation. Assuming that periodicals should be placed where a reader would tend to look for them rather than where a librarian's system or logic otherwise indicates, and that it has been decided to arrange all periodicals in a single alphabet, regardless of form differences (e.g. frequency or size), a problem of shelf arrangement arises. The alphabetical arrangement is undoubtedly the best for most purposes as it is immediately intelligible, but the problem is whether alphabetization should be exclusively by titles or by a combination of titles and corporate entries, i.e. *Journal of the Society of Motion Picture and Television Engineers* or *Society of Motion Picture and Television Engineers. Journal* (see Chapter VII). When this problem arose during the reorganization of the periodical collection of the Harvard Medical Library, seven medical librarians were circularized for their opinions on the respective merits of title or corporate entry, where appropriate. The consensus of opinion was that alphabetical arrangement by strict title entry, ignoring articles and prepositions, on the lines of the *World list of scientific periodicals* was the most desirable and effective form of arrangement. It was not felt that there was a breaking point in terms of the size of the serials collection at which corporate entry practice has to be adopted, nor that a multiplicity of serials beginning with 'Revista', 'Boletin', 'Journal', etc., was a practical drawback in arrangement or use by readers (9).

This multiplicity of qualifications proved a problem in the National Library of Medicine (U.S.A.). Eleanor R. Hastings explains (10) '. . . the collection contains a heavy duplication of both titles in many languages and of title entry words. This point may be emphasized by citing examples of the Library's

holdings of Spanish language journals titles which have the same title through the first three words of the entry. Examples include the 23 entries beginning Revista brasileira de; 43 entries beginning Revista de medicine; 76 entries beginning Revista médica de; and literally hundreds of entries under such words as Bulletin, Journal, Review, etc.

'The alphabetical arrangement of the serial collection had proved desirable through years of library use. Therefore, in the new plan an alphabetical arrangement was a "must", and because of the duplication of titles noted above it was decided that call numbers would be needed to identify titles and keep them in alphabetical order.

Miss Hastings's plan for the numbering of the periodicals is described in her article and involves the use of a two-letter combination made up of the first two letters of the entry (not an article), e.g. RE for Revista, followed by numerals which can be expanded and filed as decimal numbers.

If such an arrangement is used some form of index will be necessary and this may take the form of a strip index attached to the shelf or housed near by. This consists of a number of metal frames mounted on brackets so that they may be rotated to view both sides. The titles of the periodicals are typed on narrow strips of cards, together with their location number, and slipped into transparent holders which are then inserted in the frames in the correct sequence. Cross-references to alternative titles or changes and amalgamations may be made in this index if necessary, although for the readers' convenience it can be useful to place dummies bearing this information on the shelf itself.

Both classified and form arrangements and a numerical sequence will require a symbol on the spines of boxes to facilitate shelving as well as requiring reference to a list or catalogue.

When shelving periodicals plenty of space should be allowed between each title to allow for expansion. For bound periodicals, it has been estimated that the shelving space required should be at least 15 feet per 100 annual volumes.

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CHAPTER IX

REFERENCE WORK WITH PERIODICALS

9.1 Value and scope

The distinct contribution of periodicals to reference work has been admirably described by authors of well-known text-books on basic reference material and library assistance to readers (1), and may be summarized as follows:

(1) They furnish articles and papers more recent than any book on a subject, particularly in the ever-changing fields of politics, economics, science and technology. The latest ideas on any subject will be found in the periodical literature, rather than in a book.

(2) They contain articles and papers on subjects about which the library may have no books and, particularly on matters of local or temporary interest, on subjects on which no books have yet been written. Most original scientific work is first published in a periodical.

(3) Authorities and specialists in many subjects contribute to periodicals and frequently never write books. Which persons are at work on a particular problem and the results of work already done are usually found in periodicals.

(4) Those journals which publish abstracts or digests are generally the best media for answering general reference questions quickly because of the brevity of their contents.

(5) The most useful periodicals have their own annual or cumulative index. In addition, they are covered by the various indexing and abstracting services. Indexes are of the utmost importance in literature searches and reference work generally.

This is all very fine, but as Ronald Staveley has written: 'The trouble with periodicals is that so many exist, so many new ones are required and provided each year, so much money goes in publishing them and buying them, so much time is wasted in locating, obtaining and reading them' (2). The problem may be gauged by the fact that if the plan for the new *Union list of serials* comes to fruition it will list some 500,000 titles. The rate of growth in scientific publishing, in particular,

has been estimated at 5 to 10 per cent. per year, and is causing concern not only in library but also in scientific circles. The different interpretations put upon the term 'scientific periodical' account in part for the wide variations in estimates of their number, ranging from 25,000 to 100,000 with 1,000,000 significant articles per year.

The problem is not new and has been the subject of many conferences. The opinion that the rate of increase is not justified by the increase in research was expressed at a meeting of the Scientific Publications Council in 1960, when a plea was made for restraint on the part of both authors and publishers (3). One of the more important findings on one of the primary surveys conducted in this country, *The use of technical literature by industrial technologists* (1959) (4), was that technologists use their literature for news rather than reference and that the actual level of interest in the literature generally is a matter for concern. This survey, which was limited to the electrical and electronics industry only, contained evidence that pressure of time is not an important reason why the literature is used so little, but B. C. Vickery in a summary of results obtained from a number of surveys (5) stresses that the time available to any working scientist for searching and reading is strictly limited. Mr Vickery's summary covers many of the papers on the use of scientific literature presented at the International Conference on Scientific Information, Washington, November 1958, and also draws attention to the *Review of studies in the flow of information among scientists*, a two-volume report prepared by the Bureau of Applied Social Research, British Columbia University, January 1960.

Various solutions to the problem have been offered from time to time, ranging from national clearing houses to alternatives to the journals themselves—usually by separates and offprints. So far, none of these plans have had any perceptible effect and librarians remain faced with the existing situation.

The most important fact to realize when dealing with periodicals of reference value is that articles on any one subject are distributed in periodicals not primarily covering that subject. Serious articles on the film, for instance, can be found in such diverse periodicals as *Aslib proceedings*, *Theatre arts* and the *Economist*. Similarly, in some subjects there are a vast

number of periodicals with original papers scattered proportionally, whilst in other subjects important new work can be discovered by reference to only a few titles.

Discussing the aggregate coverage of journals, Staveley has pointed out: 'It is probable that the serious journals in most subjects are unable to publish a proportion of the worthy manuscripts they receive. Some cases of supplementary publication are to be found. The *British journal of psychology* issues regular monograph supplements and statistical supplements, and the American *Astrophysical journal* has a regular supplement given single papers, with abstracts and tables. There is also a supplement series for the Swedish *Acta agriculturae scandinavia* to accommodate articles of unusual length. The Zoological Society of London is one of several that publish *Transactions* in a larger format than *Proceedings*, providing a more satisfactory medium for monographs needing large size illustration. Occasionally, editors are found who publish some articles as summaries, offering interested readers the full text on request' (6).

Delay in publication is another factor to be taken into account. In some subjects contributions may be one or two years old, particularly in the case of the transactions or proceedings of societies, etc. Staveley writes: 'Some journals announce the titles of future articles as soon as they are accepted. The *Proceedings of the Cambridge Philosophical Society* does this. One or two societies have linked this useful feature with an offprint service. A reader may thus order an offprint in advance, and hope to get it at about the time the journal itself arrives. It is also worth mentioning that the offprint service itself is much less rare than formerly, a fact very welcome to special librarians' (7).

The American Documentation Institute has developed the system known as auxiliary publication. To provide partial relief from the pressure on already overcrowded periodicals, this system allows an editor to publish a résumé instead of the full-length article, with an indication that the full text can be obtained from the Institute. The Auxiliary Publications Programme also provides a medium for publishing appendices or tabular material too extensive to incorporate in an article accepted for publication in a journal.

One of the chief drawbacks to the use of periodicals in reference work, however, is the failure of their publishers to appreciate bibliographical requirements regarding format and presentation; this has resulted in some deplorable variations. These variations are chiefly evident in size, treatment of title, pagination, numbering of volumes and parts, and methods of indexing. The American Library Association and the Special Libraries Association, in conjunction with the American Standards Association, submitted some recommendations for improvement in 1934 to 2,400 American publishers, but the results have been disappointing. As a result of the 1947 Annual Conference, Aslib set up a committee to study the effect of the make-up of scientific and technical periodicals on their efficiency as reference tools. This committee reported to the Royal Society Information Conference, held in 1948 (8). Consequently the British Standards Institution has published B.S. 2509: 1959, *British standard for periodicals of reference value: form and presentation* (9), which made its first appearance in 1954 under the title *Layout of periodicals*. The new title of B.S. 2509: 1959 avoids the term 'Layout' which in this field is often associated with purely typographical layout, rather than general form and presentation of material. The International Standards Organization's *Short contents list of periodicals or other documents* (10) sets out the data to be given under each item in the contents list and the preferred positions of the list in each issue.

In June 1960, the Society of Indexers published *Standards for indexes to learned and scientific periodicals*, which outline the minimum requirements for adequate indexes (see p. 156). A close familiarity with each periodical cannot be expected in a library receiving, for instance, 1,500 titles, possibly in many languages, although many foreign journals give a brief summary of their contents in English at the end of the publication, but in those libraries which do not index or abstract their periodicals as they are received, the more important ones should at least receive a summary survey. It is well to know beforehand what sort of information is to be found in various types of periodicals and to remember their particular form and layout. Much time can be saved by remembering where to look in a particular publication for special items of informa-

tion, and similarly time can be saved by remembering where *not* to look! The contents of the independent periodicals are usually referred to as 'articles', and those appearing in the transactions or proceedings of societies, etc., as 'papers'. A distinction should also be made between periodicals which print, as a rule, the results of original research and those which generally contain fresh accounts of knowledge already covered in previous publications. The Royal Society have published *A list of British scientific publications reporting original work or critical reviews* (see p. 15). Normally a society issues papers relative to its purpose, but occasionally papers are presented on other subjects, as instanced by Mr H. C. Richardson (11): 'The Institution of Civil Engineers, for example, has had papers presented on such diverse subjects as the manufacture of paraffin, currency, printing on fabrics, which are hardly covered by the term civil engineering, while the Institution of Civil Engineers of Ireland has a paper on the Woodhead tunnel. . . .'

The late Dr S. C. Bradford formulated a 'law of scattering' of articles in scientific and technical periodicals. His preoccupation with the need for the complete coverage of scientific and technical literature by the indexing and abstracting services led him to investigate the manner in which articles on any one subject were distributed in periodicals not primarily covering that subject. On the basis of experiments conducted at the Science Museum Library in 1933 he deduced a formula which has been much criticized but has been vindicated in an article by Mr B. C. Vickery (12). This formula, or law, of distribution of papers on a given subject was stated by Dr Bradford as follows: 'If scientific journals are arranged in order of decreasing productivity of articles on a given subject they may be divided into a nucleus of periodicals more particularly devoted to the subject and several groups or zones containing the same number of articles as the nucleus, when the number of periodicals in the nucleus and succeeding zones will be as $1 : n : n^2$' (5). Professor J. D. Bernal, at the Royal Society's Scientific Information Conference, drew attention to the way in which the results of a pilot questionnaire on the use of scientific literature confirmed Dr Bradford's deductions. These were that a large number of articles were being entirely

missed by the indexing and abstracting services through lack of collaboration between those services; Dr Bradford argued that 'complete documentation' could only be brought about by the widespread adoption of the Universal Decimal Classification by these documentation services.

The distribution of references consulted in information searches carried out in the petroleum industry was included in the results of a survey by P. F. Cole (13). This important survey, although limited to a particular field, tends to support Bradford's 'law of scattering' and established the facts that periodicals were consulted for 58 per cent. of the answers to the questions and that the list of most used journals from the survey correlates very much better with an abstract count than with a citation count.

The implications of these studies emphasize what is well known to most librarians, that in planning reference policies it should be borne in mind that no library serving the scientist can ever be restricted to a 'special' subject since the information needs are so varied. Periodical material is generally located through indexes and abstracting services, however, whose scope and methods of presentation must be thoroughly mastered.

9.2 Indexing and abstracting services

An Expert Committee on Scientific Abstracting convened in April 1948, for preliminary work in connection with the Unesco Conference on Science Abstracting held in June 1949, formulated the following definitions of 'index' and 'abstract' (14):

INDEX. A systematically arranged list giving enough information about each item to enable it to be identified and traced.

A *bibliographical index* of publications or articles contains no material descriptive of the publication or article other than the title and other bibliographical information.

An *analytic index* is a list of the specific topics contained in articles or publications, as, for instance, chemical compounds, biological organisms, processes, theoretical principles, to enable significant information to be traced.

An *annotated index* contains, in addition to the bibliographical information, information relevant to the contents, scope, or importance of the publication or article.

ABSTRACT. A summary of a publication or article accompanied by an adequate bibliographical description to enable the publication or article to be traced.

An *indicative abstract* is a short abstract written with the intention to enable the reader to decide whether he should read the original publication or article.

An *informative abstract* summarizes the principal arguments and gives the principal data of the original publication or article.

A *selective abstracting service* selects for abstracting only those publications and articles which it considers make valuable contributions to knowledge, or are likely to be of use to a specific class of reader.

A *comprehensive abstracting service* presumes to abstract every publication and article appearing in its subject field which contains original or valuable material.

The value of abstracting journals as key tools for searching literature is well recognized, but they also provide one of the chief means of learning of the existence of current foreign work and thus supplement the reading of the original foreign periodicals themselves. W. Ashworth gives the warning, however: 'It is important to remember that abstracts have been prepared from a specific viewpoint, and as a *guide* to original material. They should not be used as vehicles of information in themselves unless the original is completely inaccessible, in which case it should be made perfectly clear that the quotation is from an abstract. An abstract, out of the context of its own journal and used for the purpose for which it was not intended, can be misleading through no fault of the abstractor' (15).

Many libraries do not index or abstract the periodicals they receive but rely on the indexing and abstracting journals and thus avoid unnecessary duplication. It is important, therefore, to record for each title received the specific index or indexes covering it. However, in spite of the large number of indexing and abstracting services, the whole of the literature is by no means covered, so that the librarian must accept the impossibility of making a complete bibliography from the indexing and abstracting journals alone. This is particularly true of the humanities and social sciences where the level of documentation has not yet attained that reached in science and technology. One of the main functions of a special library, however, should be a regular survey of current literature. The extent and scope of such a survey is obviously dependent on the staff available. Some surveys are limited to the periodicals received by the library, others are augmented by including reviews of articles contained in periodicals held by other libraries. In

the case of small libraries, the survey usually takes the form of a bulletin or circular, usually in mimeographed form. In larger libraries, it is often a more ambitious product which is printed and widely distributed. In some cases, however, these surveys are prepared from cards which are filed traditionally by author and subject.

In Great Britain abstracting services are not centralized, the responsibility being shared by various organizations with special interests. National documentation centres, as they have come to be called, are the rule rather than the exception in less developed countries. This is a trend which has had active support from Unesco. Their model has been the Centre National de la Recherche Scientifique et Technique (CNRS), set up in France in 1939 under the aegis of the Ministry of Education. The CNRS works in close collaboration with numerous documentation centres, many of them listed in a directory published by Unesco and the Direction des Bibliothèques of the French Ministry of Education (16). The U.S.S.R.'s All Union Institute of Scientific and Technical Information and its related bodies, the Central Bibliographical Chamber and the Central Institute of Technical Economic Information, which together employ several thousand abstractors, is perhaps the best model (17). In the United States, representatives of fourteen major abstracting and indexing services set up the National Federation of Science Abstracting and Indexing Services in 1958 (18). The Federation claims that the combined total of the coverage by their members in 1958 was 6 per cent. greater than the Russian Institute. In 1960 they published a *Guide to U.S. indexing and abstracting services . . . in science and technology*.

The Royal Society's Scientific Information Conference led to the formation of a Standard Consultative Committee of abstracting organizations in this country for the mutual exchange of views and to promote co-operation. This Committee was responsible for the publication of the list of British journals containing abstracts (19). This has been superseded by the Library Association's *Guide to current British periodicals*, which contains an appendix covering abstracting journals (20).

One of the main functions of a national documentation centre is to keep its own country aware of foreign work and to

make available to other countries the results of indigenous research.

A list of abstracting services will be found in Chapter II, para. 2.2.

Since indexes and indexing services are more limited in scope than abstracts and abstracting services; it might be as well to examine each separately:

9.21 Indexes and indexing services

(i) General index to a single volume. Most periodicals issue an index to each volume. 'Although these indexes are usually alphabetically arranged, there may be separate alphabets for authors and subjects, and group headings, such as "Book reviews", "Obituaries", etc. may have been used. Subjects may be indexed specifically or grouped under broad subject headings. A number of journals, mainly of a scientific character, classify their articles by the Universal Decimal Classification, and their indexes may be arranged in this way' (21). As a tool for methodical literature searching, these indexes are inefficient because their scope is limited to the particular year of the particular periodical, so that many volumes may have to be consulted in turn if all the articles that may have been published on any given subject over a period of years are required. Moreover, there can be no certainty that relevant references may not have appeared in other periodicals.

The problem of indexes to periodicals is a vexed one. It is true that many periodicals publish their own indexes, but frequently these are little more than contents lists which do not attempt to analyse the contents of the articles in detail, or even to group the titles under suitable subject headings. Few are compiled on scientific principles and only too often are compiled by inexperienced indexers.

Robert L. Collison in his *Indexes and indexing* states :'The indexing of periodicals is based on the same principles as those for the indexing of books, but it involves a stricter discipline, a wider knowledge and unswerving consistency. It is comparatively easy to make a good and consistent index to a book, for it is a single operation which can be carried out in a comparatively short space of time, and it is not too large a task to be carried out by one person. An index to periodicals is however

an operation carried out over a long period—possibly performed by several people—and covers a greater amount and variety of material, generally speaking. Continuative indexing means that the principles on which the index is compiled in one month must be strictly followed in all further instalments if the reader is to discover quickly and easily *all* the material on his subject. If this is not done, there is a danger that some users of the index may miss important items: for instance, in one famous annual index of periodicals, articles on printing are entered under the heading PRINTING in some issues, and under the heading TYPOGRAPHY in others. Thus the research worker who is looking up what has been published on this subject must waste time in looking under both headings if he is not certain whether the entries will appear under one or other heading' (22).

To remedy this state of affairs, the Society of Indexers have published the following recommendations of standards for use in learned and scientific periodicals (23).

1. The value of any journal is enhanced by an adequate index, and no learned or scientific periodical should be published without this essential feature.

2. Every volume of a journal should be provided with an adequate index. While it may not be possible for each number or part of a journal to contain this feature, these issues should have tables-of-contents displayed in prominent positions either on the cover (front or back) or in the pages preceding the actual text. An alphabetical list of authors in each issue is most useful.

3. The index to a journal should be issued in or with the final part of the periodical, failing which it should be published as soon as possible after the publication of the final issue. Preferably it should be printed separately, or in a manner permitting ready extraction for binding purposes. It should not be stitched or stapled in such a way that the fold of paper forming an issue must be mutilated in order to extract the index.

4. A dictionary index combining author, subject and title entries may be preferable to separate author and subject indexes, but where separate indexes are provided their functions should be clearly defined at the beginning of each index and at the top of each page.

5. The names of all co-authors should be printed in the index, cross-references only being provided if space is limited.

6. Special features should be indexed under such headings as Book Reviews, Editorials, Obituaries, etc., but the items should also appear under author, title and subject headings. Corrections of printers' or authors' errors, additional material in the form of letters, etc., should be noted by page numbers under the appropriate entries.

7. Abbreviations used in the index should be listed at the head of entries, and any special form of arrangement should be noted, as well as indications of the purpose of any special type (bold or italics) used for page numbers.

8. Articles in journals should be indexed under authors, titles, significant words in titles, and under the subjects dealt with in the text. Some articles may require many entries for subjects, synonyms, and for authorities quoted. There is no reason why entries in bibliographies should be omitted in indexes to journals when they are considered useful in indexes to books.

9. Cumulative indexes are invaluable to librarians, bibliographers and research workers. Certain journals publish an index to the first part of a volume, and cumulate it through the parts until it appears in the final issue as the index to the complete volume. Five-yearly, decennial, or indexes covering longer periods are of vital importance in libraries, and these are usually sold separately. It is appreciated that a cumulative index to a weekly journal might be large and costly, but most libraries would subscribe to all indexes to periodicals in their files.

10. It is useless to provide indexes set in type too small for reading under normal circumstances. 8 point is preferable, but 6 point should be the smallest employed. Adequate spacing and intelligent layout are also necessary to facilitate quick reference to an index.

11. A table-of-contents, with or without an alphabetical list of authors' names, does not take the place of an index.

12. Indexes should be compiled by competent indexers having some knowledge of the subject being indexed. A journal badly indexed is liable to acquire the reputation of a bad journal.

The Society collaborated with the British Standards Institution in the preparation of *Recommendations for the preparation of indexes for books, periodicals and other publications* (B.S. 3700: 1964). The American Standards Association's Sub-Committee on Indexing has prepared a draft standard (24) to which is added two selected bibliographies as an appendix to provide additional reference material.

(ii) GENERAL INDEX TO A PORTION OF A SET. Some periodicals publish cumulative indexes for groups of volumes covering several years' run which save time in not having to consult separate annual indexes, but as the cumulative indexes are not available until the end of a period they are of no help in collecting the more recent references. A useful bibliography of cumulative indexes is the following:

Haskell, D. C. *comp.* Check list of cumulative indexes to individual periodicals in the New York Public Library. New York, The Library, 1942. pp. 376.

(iii) GENERAL INDEX (OR INDEX SERVICE) TO A NUMBER OF SELECTED PERIODICALS. The following is a selection of this type of publication, listed by country of origin:

BELGIUM
Bulletin des sommaires des périodiques de Belgique. Bruxelles, 1942–

CANADA
Canadian periodical index. Toronto, 1938–

DENMARK
Dansk tidsskrift-index. Copenhagen, 1915–

FRANCE
Bulletin photographique des sommaires et compte rendus bibliographiques des périodiques français et étrangers. Bois-Colombes, 1936–

GERMANY
Internationale Bibliographie der Zeitschriftenliteratur, Leipzig, 1897–

GREAT BRITAIN
British humanities index. Library Association, 1962–
British technology index. Library Association, 1962–
Subject index to periodicals. Library Association, 1915–22, 1916–61

NETHERLANDS
Nijhoff's index op de Nederlandsche periodieken van algemeenen inhoud, 's-Gravenhage, 1909–

NORWAY
Norsk Tidsskriftindex. Oslo, 1918–

SOUTH AFRICA
Index to South African periodicals. Johannesburg, 1939–

U.S.S.R.
Zurnal naya litopis. Moscow, 1926–

UNITED STATES OF AMERICA
Abridged readers' guide to periodical literature. New York, H. W. Wilson, 1935–
Annual magazine subject index, including the dramatic index. Boston, 1907–, 1909–
International index to periodicals, devoted chiefly to the humanities and science. New York, H. W. Wilson, 1907–
Poole's index to periodical literature. Boston, 2 vols, 1802–81. Supplements, 1882–6; 1887–91; 1892–6; 1897–1901; 1902–6.
Nineteenth century reader's guide to periodical literature, 1890–9, with supplementary indexing, 1900–22, 2 vols. New York, H. W. Wilson, 1944.
Readers' guide to periodical literature. New York, 1900– H. W. Wilson, 1905–

YUGOSLAVIA
Bibliografija rasprava, clanaka i knjizevnih radova u casopisma Narodne Republike Havatske. Zagreb, 1945/6, 1948/9–

(iv) GENERAL INDEX (OR INDEX SERVICE) TO A LIST OF PERIODICALS COVERING A SPECIAL FIELD. Because of the scattering of articles on individual subjects over a great number of periodicals, and the difficulties of recording material in fugitive periodicals published in the less familiar languages, very few of these specialized indexes can claim to be exhaustive. This type of index includes the following:

Agricultural index. New York, H. W. Wilson, 1916–
Art index. New York, H. W. Wilson, 1929–
Bibliographic index. New York, H. W. Wilson, 1938–
Biography index. New York, H. W. Wilson, 1946–
Dramatic index. Boston, 1909–
Education index. New York, H. W. Wilson, 1929–
Engineering index. New York, 1891–
Galloupe's general index to engineering periodicals. Boston, 1888–93. 2 vols.
Index to legal periodicals. New York, H. W. Wilson, 1908–
Industrial arts index. New York, H. W. Wilson, 1913–
Public affairs information service. New York, 1915–

All these published indexes, with the exception of those published by the H. W. Wilson Company, vary in format and presentation. Fuller details of their scope and methods will be found in the various works by the authors mentioned at the

beginning of this chapter. For information regarding those in foreign languages readers should consult Louise-Noëlle Malclès. *Les sources du travail bibliographique* (25).

Indexing services produced commercially in this country have had an unhappy time. Two of the most promising indexing journals, the Cleaver-Hume *Technical article index* and *Iota* (Index of technical articles) had short lives. *Iota*, in particular, promised much for British libraries and undeterred by its failure, the Library Association started publication in January 1962 of a *British technology index*. It was felt that the Cleaver-Hume index and *Iota* suffered from two main weaknesses: extremely broad classification and lack of cumulation. This is remedied in the new publication which is a monthly index to titles of articles appearing in about 400 British technical periodicals, arranged by an alphabetical list of subject headings, with an annual cumulation in a bound volume. The Association's *Subject index to periodicals* has been reorganized to complement this service and renamed the *Humanities index* and is produced on similar lines.

(v) PRINTED INDEX CARDS. The alternative to an index in page form is to maintain it on cards which enable new items to be interpolated at their proper places among those already collated, so that an index is never out of date and only one search need be made. There are some services which issue 3 in. by 5 in. cards for incorporation in such indexes. The largest circulation is that operated by the Engineering Index Service, which is associated with the joint Engineering Societies Library, 29 West 39th Street, New York. This service circulates in card form short indicative abstracts of some 50,000 articles a year appearing in over 2,000 journals received by that library. The Wistar Institute of Anatomy and Biology, Philadelphia, issues card abstracts of some 600 original papers which appear in the ten journals it publishes relating to different branches of biological science. These abstracts are the authors' own summaries of their work and they are circulated to subscribers several weeks before the papers themselves are ready. The Economische Voorlichtingdienst (Economic Information Service), Bezuidernhoutsweg 95, The Hague, issues abstracts of literature relating to commercial and economic affairs on folded paper *fiches* which, folded in half, are inter-

changeable with 5 in. × 3 in. cards. Further information regarding these services is contained in an article by Dr J. E. Holmstrom, 'Printed index cards and guides' in the *Journal of documentation* (26), from which the foregoing information was obtained. Since 1949 the Soviet All-Union Book Chamber has started to print analytical cards for articles appearing in 140 of the most important Soviet periodicals (27).

In this country the Iron and Steel Institute operates a card service based on the fortnightly supply of abstract material that will appear later in its journal.

(vi) SPECIAL CARD INDEXES PREPARED BY THE LIBRARY. The special librarian plays a large part in the field of indexing. The majority of special libraries compile their own index to periodical literature, usually containing short indicative abstracts, because (*a*) they do not subscribe to the standard indexing and abstracting services, (*b*) the periodicals to which they subscribe are not covered by these services, (*c*) their index must be up-to-date and they cannot afford the delay between the publication of the periodicals and the publication of the indexes, or (*d*) they wish to have at hand special indexes to special material. The indexes are compiled as a result of reading the literature generally known as 'documentation surveys', and apart from their obvious use as a reference tool, the articles indexed form the basis of any bulletin or abstracts or survey of the literature that the library may publish or circulate.

In some fields librarians have co-operated to good effect and produced indexes on particular subjects which are distributed to libraries other than those directly concerned. They usually take the form of duplicated lists since few can support large ventures, however much they may desire to do so. As a result, these works do not get the circulation and attention they may merit.

Indexing is usually limited to a selection of periodicals taken currently by the library. A certain number are of such a high standard that most of the articles in them must be indexed, but others, usually a fairly large number, include only a few articles worth indexing. Each field of interest obviously has its borderline cases. These can be covered by co-operative indexing. Apart from the reasons already given, many special

libraries continue to compile their own indexes since they require them to be compiled from their own point of view. The points of interest to one library may be quite different from those which appeal to another. An article on the manufacture of paper containers, for instance, may be of equal interest to the Printing, Packaging and Allied Trades Research Association and the Royal Institute of Public Health and Hygiene. This is one of the factors which compels many special libraries to index for themselves the more important articles, and emphasizes that any centralized indexing system must be supplemented by individual indexing for selected items.

K. Boodson, in the Aslib *Handbook*, states: 'From the information point of view scanning, considered as the perusal of all suitable material, mainly periodicals, and the marking up of items for inclusion . . . is preferably done by library staff. It requires a reasonably senior level, with intimate knowledge of the unit's range of interests. The object and level of the scanning must be clearly understood, whether it is to be confined solely to formal papers, or to be comprehensive and include editorial features, letters to the editor, and advertisements. With most library organizations the limiting factor will be the time available, varying inevitably with the scanning speed of the individual. One published figure may be quoted, that of Fisons Ltd who reported in 1956 that 262 journals required a total scanning time of sixty hours a week, provided by two to three hours a week of the information officer's time and two-thirds of the time of each of two assistant information officers. An important aspect of scanning is the selection of one article from a number reporting the same development. Simultaneous publication in a number of journals of the same item of technical news, possibly resulting from a general press release, will require a comparison to select the most detailed. Where fuller reports appear subsequent to a short one already marked up . . . policy must be established to cover the method of dealing with the second report' (28).

Methods of indexing must be considered in relation to the general problem of information retrieval. A major survey of the comparative efficiency of indexing systems in this context has been carried out under the Aslib Cranfield Research Project (29). The routine of indexing is relatively simple. Fol-

lowing the scanning of each article, those to be indexed should have the main index heading written against the title in pencil, other index headings being written against the relevant passages. When all the articles and other items in the given periodical have been treated in this way, the index entries can be made out. Whatever method is used, the entry should conform as far as possible to the British Standards Institution's *Bibliographical references* (B.S. 1629: 1950). This publication indicates a method by which full catalogue entries for periodical articles and periodical titles may be abridged to contain the most important details of the entry. Added entries can be made, where necessary, under the author's name, distinctive titles, additional subjects, and important series titles if enquirers are likely to consult a complete series of articles. For methods of duplicating cards and the preparation of lists, etc., readers are advised to consult the Aslib *Handbook*.

9.22 Abstract journals and abstracting services

Apart from the definitions which have already been given, Sir David Chadwick offered the following definitions and characteristics of abstract journals and abstracting agencies at the Royal Society Conference (30):

'The characteristics of an abstract journal, whatever its title, are assumed to be as follows: it is compiled and issued regularly, is devoted in whole or large part to abstracts of scientific papers, is under scientific editorship, i.e. a scientist trained in its subject and known by name (or a committee of scientists or a scientific society), responsible for the accuracy of the abstracts issued. In other words, it claims authority.

'An abstracting service or agency denotes the organization responsible for the compilation and issue of such abstracts, whatever other duties it may discharge.'

'*Indicative and informative abstract journals.*—Journals can be classified as indicative or informative according to the general type of their abstracts. Both types of abstract occur, however, in both kinds of journals, especially in the informative ones. Only a portion of a paper may be of detailed interest to those served by an informative journal. That portion will be fully abstracted, but the nature of the rest of the paper merely indicated. Or the indicative form may be used for

papers which editors deem advisable to bring to the notice of their readers, but which either cannot be summarized at reasonable length or contain nothing new. Pressure of space, coupled with a desire to remain comprehensive, may also cause resort to the indicative type.

'Most of the abstract journals published in the United Kingdom and generally available are of the informative type.

'The chief purposes of abstracts are to provide:

current awareness of papers, for which it is often claimed that the indicative abstract suffices;
fuller information by the informative type of abstract;
reference and information on older papers.'

As a result of the Royal Society Conference, an Abstracting Consultative Committee was set up to help co-ordinate the work of the various abstracting agencies. They have published a *List of periodicals and bulletins containing abstracts, published in Great Britain . . .* 1950 (see p. 15). Apart from the usual details of publisher, price, etc., this publication also gives information regarding the aim of each journal, whether it is selective or comprehensive, the average number of words in each abstract, the exact field covered, the number of abstracts published annually, etc. There is also an appendix giving a partial list of journals containing abstracts published in the British Commonwealth. Details of the lists published by the International Federation for Documentation have already been given. Other information is contained in the publications listed on p. 15.

One of the fundamental weaknesses in documentation is the lack of a comprehensive study on the organization and operation of abstracting services. The Abstracting Board of the International Council of Scientific Unions and the International Federation for Documentation have done some good work. Most abstracting journals publish annual, decennial or quinquennial indexes. These indexes have been the subject of complaints, together with the varying practices used in subject headings. The need for uniformity of practice has also been stressed on the international level, especially in regard to the forms of entry, such as 'Author, title, journal' or 'Title, author, journal', etc. The lack of, and duplication in, subject

coverage is particularly important and many proposals have been made from time to time to rationalize the situation. Though the problems of reaching agreement between abstracting organizations already functioning as separate units in the same field are considerable, it is worth noting that Unesco has the subject of abstracting and related services in its programme for 1961/2. Staveley, in his book, draws attention to the work of the Abstracting Board of the International Council of Scientific Unions in the field of co-ordination and also gives details of the work done by international bodies in the field of social science (31).

It would assist the librarian in checking the aggregate coverage in his subject if guides to indexing and abstracting services were more plentiful and up-to-date, particularly for the humanities and social sciences. Few are published independently but are more often to be found in other works, particularly periodicals. *Aslib proceedings* and other library periodicals publish lists from time to time and usually note the existence of such lists. The Library Association's *Guide to reference material* (32) includes abstracting services and their *Guide to current British periodicals* (33) shows where individual journals are indexed or abstracted.

9.3 Locating difficult periodical references

Abstracts should not be regarded as ends in themselves, however, but only as time-savers which indicate which of the original publications is worth consulting. Unfortunately, however, it may prove to be extremely difficut to locate some of the original references. Quoting from a letter of Dr Crane, of *Chemical abstracts*, Miss Gretchen D. Little, in a paper presented before the Science-Technology Group at the 36th Annual Convention of the Special Libraries Association, gives the following explanation (34): 'There is no satisfactory general answer as to how one can obtain original articles corresponding to abstracts. We are getting our information in a variety of ways and do not always see the original paper here [the United States].

'Some abstracts we have had made overseas, as in Switzerland, Sweden or England, and the corresponding journals were not, at the time at least, available in this country in so far as we could learn.

'Some abstracts have been made through other abstract journals. In these instances we have managed to gain access to the abstract journal, but not to the original journal.'

Although this letter was written during a period when bibliographical contacts were not easy, this situation is not unknown today. Having learned to master the various indexes and abstracting journals and traced a particular reference, the problem of identifying a periodical from an abbreviated title (see p. 167) and obtaining a copy of the desired reference begins. This may not prove too difficult for the larger library which has the necessary aids to location work, but the smaller library and the recently started libraries which are unable to obtain these reference tools must necessarily fall back on the National Lending Library for Science and Technology, National Central Library, Aslib, and the larger libraries. When applying for assistance to these organizations however, complete bibliographical references should be given. If a reference supplied by a reader is at all unusual, his source should be ascertained and forwarded with the request for assistance.

The most frequent cause of trouble is that authors of articles in periodicals frequently cite references in other periodicals incorrectly. These citations may be peculiar in that the author has used an unfamiliar abbreviation for the title of the periodical, translated or transliterated a title incorrectly, or inadvertently omitted the title of the periodical altogether, leaving the reader to suppose that the reference cited refers to a book! As a guidance to authors and others the British Standards Institution have issed *Bibliographical references* (B.S. 1629: 1950). This Standard 'is intended to apply to entries in bibliographical lists and to particulars given for identification of works, or parts of works, quoted or referred to, in reviews, abstracts, etc.' This Standard, together with that published on the transliteration of Cyrillic characters, may perhaps lessen the present bibliographical confusion on these points.

If none of the union catalogues listed in Appendix IV contain the periodical required and an application to the inter-library loan services proves unsuccessful, it might be possible to write to the author and ask him where he obtained his reference, although this method is not always satisfactory, particularly if it is a foreign title which is required. The more

usual practice is to find out the subject with which the periodical normally deals, if it is not obvious from the title, and approach an appropriate special library. In this connection, the *Aslib directory* and the *Aslib guides to sources of information in Great Britain*, and similar directories, should be consulted. As has already been stated, there is no list available of periodicals held by British libraries arranged under subjects. If an application has been made to Aslib, however, an approach to another library should be unnecessary as this organization will usually have exhausted all possible sources in this country.

When it becomes apparent that the periodical is not to be located in this country, then obviously a copy will have to be obtained from abroad. The international lending scheme conconducted by the National Central Library is usually confined to books and any periodical articles required are usually supplied in the form of photocopies. Photocopies can be paid for in Unesco book coupons and obtained through one of the documentary reproduction services mentioned in Chapter IV. In order to ascertain which foreign library is most likely to have a copy of the required periodical the catalogues listed in Appendix VI, arranged under country of origin, should be consulted.

When undertaking to locate what appears to be a difficult periodical reference it is reasonable to warn the enquirer that it may take some time. A record of progress should be kept to avoid looking at the same catalogue twice, particularly if the search is either being shared with, or likely to be passed on to, another member of the staff. Care should be taken to ensure that enquiries to other libraries are not duplicated; a note should be made to indicate which libraries have already been approached. When the periodical is ultimately run to earth it should be entered in the library's own location index for future reference. This index should be on cards bearing the title of the periodical and other bibliographical references on the obverse, and the name of the library or libraries holding the item on the reverse side.

9.4 Abbreviations for titles

The need for a standard method of abbreviating the titles of periodicals was first realized during the compilation of the first edition of the *World list of scientific periodicals*, which

was published in 1925. Several systems already existed, but these were based on one language only and were, therefore, unsuitable for international usage. The most disquieting state of affairs, however, was, and still is, the practice of specialists in their individual spheres of science employing abbreviations which were and are of a personal character; the terms employed are often too concise and are consequently undecipherable for the general reader. For example, the letter E has been used for *Electronics*, *Engineer*, *Engineering*, and others, U.A.E. for *L'Égypte agricole* (published by the Union des Agriculteurs d'Egypte), etc.

The purpose of abbreviating titles of periodicals is to save space and time in transcribing, typing and printing them for bibliographical references and title lists. The examples given in the preceding paragraph emphasize that this must be done as consistently as possible, so that anyone familiar with the subject concerned can identify a periodical from its abbreviated title.

Mr W. A. Smith, then editor of the *World list*, established a system of abbreviations which were later elaborated by the International Institute of Intellectual Co-operation (35), and the general rules, published for international usage, were as follows:

(1) Titles not abbreviated beyond easy recognition.
(2) Abridged form to retain all words other than articles, conjunctions, prepositions and analogous locutions.
(3) Normal method of abbreviation by shortening, letters omitted replaced by full stop (e.g. Medicine = Med.).
(4) Nouns spelled with capital, adjectives with small letters (e.g. Arbeiten aus dem Gebiete der experimentellen Biologie = Arb. exp. Biol.).
(5) No distinction between singular and plural (e.g. Berichte, Bericht = Ber.).
(6) Cognate words in different languages reduced to the same form when orthography permits:

Academie
Academy
Academia
} = Acad.

but:

Accademia = Accad.

Special rules:

(1) Only titles of at least two words abbreviated.
(2) Compound words, each part abbreviated (e.g. Braunkohlenarchiv = Braunk.-Arch.).
(3) Place of publication given when the abbreviation does not indicate the language of the title, when it is in a language other than that of the country in which the periodical is published, or when two or more periodicals have the same abbreviated title.

When the title begins with the name of a person, the surname only is kept (e.g. Albrecht v. Gräfes Archive für Ophthalmologie = Gräfes Arch. Opthalm.).

Generic names:

Annual Report	A.R.	Monatshefte	Mh.
Blad, Blatt, Blätter	Bl.	Proces-verbaux, Processi Verbali	P.V.
Comptes rendus	C.R.	Rendiconti	R.C.
Folyóirat	Ft.	Schrift	Schr.
Giornale	G.	Sitzungsbericht(e)	S-B.
Jahrbuch	Jb.	Skrifter	Skr.
Jahresheft	Jh.	Tidskrift, Tidsskrift, Tijdschrift	T.
Journal	J.	Zeitschrift	Z.
Lehti	L.	Žurnal	Ž.

Efforts are being made to achieve complete consistency in abbreviation. Whether this is possible, particularly on an international scale, is problematical, for national tradition and usage will inspire a certain degree of variation.

The International Federation of National Standards Associations (ISA) produced a new text of the *Code international*, with slight modifications, in 1938. This remained the authoritative text for ten years or more. After the Second World War the ISA was reconstituted as the International Organization for Standardization (ISO) and their Technical Committee 46 for Documentation (ISO/TC46) produced an *International code for the abbreviation of titles of periodicals* (ISO/R4–1953) which was approved by the ISO Council in July 1953 and was the first published ISO recommendation in the field of documentation. It was recognized that this code, which lacks a list of 'generic' names, could be of limited value but would serve as the basis for more detailed national standards.

F. L. Kent, in his article *Periodica abbreviata* (36), gives an

account of the work of ISO in this field. G. A. Lloyd, commenting on the ISO Recommendation, states: '. . . although it provides a useful guide to the practice of abbreviation, its value has been somewhat limited because there has been no accompanying list of words with abbreviations, such as was originally contained in the pre-war ISA Bulletin 23' (37).

The British Standards Institution appointed a Committee in 1948 which in January 1963 issued a *Draft British standard recommendations for abbreviation of titles of periodicals* (D62/9800). This draft British standard, which is based on ISO/R4, has been taken into account in the preparation of the fourth edition of the *World list*. It is intended that the British standard should later be supplemented by an alphabetical list of words with their abbreviations and a complementary list of abbreviations with their full forms in which the recommended abbreviations will deviate as little as possible from the usage of the *World list* and other major lists of serial publications.

The fact that the *World list* provided the basis in part for the work of the International Institute of Intellectual Co-operation lends weight to suggestions that the *World list* should be taken as the reference document for the abbreviation of titles of periodicals. The arguments against this and the desirability of establishing a list of abbreviations at an international level are set out in D. Loman's article *Standardization in documentation* (38).

The American Standards Association approved in November 1963 an *American standard for periodical title abbreviations* (39). This differs from the rules given in ISO/R4 for capitalization and punctuation.

Abbreviations of Soviet scientific and technical serials have been published by E. L. Fisher (40) and A. & E. Kramer (41). These are listed in Cyrillic, transliterated and translated. In the case of the former, an asterisk indicates the availability of 'cover-to-cover' translations. The Library of Congress has also published a selected list of Russian abbreviations (42).

It is frequently overlooked that abbreviations are usually explained in the first few pages of standard indexes, but where the reference has been reduced to unintelligible initials the following publication will often help:

Davidsson, Ake, *comp.*
Periodica technica abbreviata, a list of initial abbreviations of technical and scientific periodicals, compiled by Ake Davidsson. Stockholm, Tekniska Litteratursällskapets, 1946. pp. 52 (Handbook no. 1).

This is a list of 2,100 abbreviations, and apart from those used for periodicals, also includes those in general use for names of scientific, technical, commercial, or industrial organizations, such as Aslib, FID, ICI, etc. In each case the abbreviation is given, then the full title, and then the country of origin. Russian abbreviations are given in Russian characters in a separate list; the corresponding full Russian titles are given in Roman characters. Several supplements to this list have appeared in *Tidskrift för dokumentation.*

The introduction of *Periodica medica. Abbreviated titles of medical periodicals* (4th ed., 1952) (43) should be read by all interested in abbreviations. This German work contains 12,624 abbreviations and generally follows accepted practice in German medical literature, with consideration of the international code and usage in other countries, particularly the United States.

9.5 Types of enquiry

Apart from the enquiries resulting from the abbreviations of titles, the following information may be desired about the periodicals themselves:

(i) Is there a particular title in existence?
(ii) Who are the publishers of a particular title?
(iii) What is the price of a single issue?—the annual subscription?
(iv) When did a particular title commence publication?
(v) When did it cease publication?
(vi) Has the title remained unchanged?
(vii) How often does it appear?
(viii) What is the volume number for a particular year?
(ix) What is the part number of a particular volume?

If the information required is not available in the library's own records, reference should be made to the various up-to-date national and international bibliographies included in those listed in Appendix IV for information regarding current periodicals. *Willings press guide, Ayer's directory of news-*

papers and periodicals, and *Ulrich's periodicals directory* are perhaps the most commonly used in this country. The first-named publication includes a section on 'Recent titular changes and amalgamations', but for information of a retrospective nature the larger union catalogues listed in the appendices will be found more useful, particularly as they contain many unusual periodicals which cannot be found in the current and other national lists. In this connection, the *Union list of serials* and the *British union catalogue of periodicals* are the most comprehensive.

Information regarding the periodicals is not so frequently required, however, as information from the periodicals themselves. In these cases the fullest possible use must be made of the indexes and abstracts. Readers also often ask for information on the use of these works, and consequently the staff should be familiar with the types of headings under which articles are listed, the division of subjects, as well as title abbreviations and citations. J. E. Wright, in his *Manual of special library technique* (2nd ed., Aslib, 1946), has given some very good examples of methods of finding information from periodicals, which should be consulted by all who are unfamiliar with the techniques of handling enquiries of this nature.

When dealing with requests for articles on a particular subject it should be remembered that unaided titles of articles appearing in bibliographical indexes frequently give a misleading indication of their contents and should, therefore, be checked accordingly. Enquiries for what titles the library has on a subject can usually be answered from the library's own indexes, and what periodicals cover a particular subject by reference to the lists and bibliographies in the appendices to this book.

9.6. Translations

An important aspect of reference work with periodicals is the use of foreign literature. It has been estimated that only 40 per cent. of published articles are in English; the remaining 60 per cent. are in many languages and pose problems of intercommunication, particularly for the scientist. It is of little value to an enquirer to learn of the existence of an article if it is written in a language he cannot understand. Many re-

searchers, too, are either unable or unwilling to attempt to read papers in the original language. Consequently there is a demand for translations.

F. Crosdale, in an article on the use of foreign literature (44), has pointed out that it is logical to consider abstracting before translation, since it is mainly from this source that the demand for translation comes. Abstracting journals provide one of the chief means of learning of the existence of foreign work. Often the abstract will be sufficiently informative to make a translation unnecessary, but in the case of indicative abstracts a full translation will be called for. Some foreign journals, particularly German, provide English abstracts; others provide an abstract section which will have to be translated. Foreign language abstracts more often than not must be locally abstracted in translation if full value is to be obtained.

Although the main stimulus for translations may be abstracts, citations of foreign literature add to the demand.

Translation is a very costly business. Many organizations maintain a translation service, but in view of the high cost of translation work it is essential to avoid useless duplication. In recent years the possibility of duplication has been reduced by the development of services to draw attention to existing translations. These either take the form of a central depository of texts or indexes to translations completed.

A conference on the problems of co-operation in recording and availability of translations was convened by Aslib in 1960 (45). Many conflicting views were expressed both by some of the authors of the papers and in contributions to the discussion. However, generally speaking co-operation is recognized as beneficial and the actual advantages which can result from a well-organized system of co-operation or exchange of translations are as follows:

(1) Avoidance of duplication.
(2) Spreading the cost of a given translation.
(3) Rapidity of procurement when a given request for a translation can be met 'from stock'.
(4) Availability of a translation which may be of some interest, but not of sufficient value to warrant commissioning a translation specially.

At the Aslib conference one of the authors favoured national translation centres with active international co-operation, whereas in the discussion other speakers had favoured a large measure of decentralization, with one contributor emphasizing the merits of the Research Associations as the ideal focus for co-operative action; others seemed to favour each industry dealing with its main subject as is at present carried out by the British Iron and Steel Industry Translation Service (BISITS).

BISITS, which is organized by the Iron and Steel Institute with the help of an Advisory Committee, officially came into being on 1st May 1957. By obtaining the co-operation of steel firms and with the help of the British Iron and Steel Research Association a service has been built up which is financially self-supporting. In order to make translations, prepared by each company, available to others, a central 'pool' was formed. Members of the scheme contribute suitable translations to the pool. These are supplemented by other translations, which are purchased or commissioned or obtained from other sources. Since the beginning, fortnightly lists of translations available and in preparation have been published (46).

In Sheffield the members of SINTO contribute to an index of translations held and depositing copies of translations with the City Librarian: organizations such as the Ministry of Supply and the Department of Scientific and Industrial Research maintain indexes of their own.

There are other indexes to translations in this country, but none of them are as important as the Commonwealth Index of Unpublished Scientific and Technical Translations maintained by Aslib. Established in 1951 as a result of a resolution of the Royal Society's Scientific Information Conference held in 1948, central agencies in each of the co-operating countries, namely Canada, South Africa, India, Australia, New Zealand and Great Britain, collect details of translations made within their respective countries and maintain a card index of all translations listed under the scheme. The translations covered by the Index are mainly from the German and Russian into English. Over two hundred organizations notify Aslib of their translations. The purpose of this Index is not to answer 'What is there available in foreign languages on this or that

subject?' but purely to answer 'Is a translation already available of this or that known foreign article?'

There are schemes in many other countries. A survey by Frances E. Kaiser of the Georgia Institute of Technology enumerated forty-two translation pools in eleven countries (47). A. G. Parker has produced a short list of organizations handling translations in the United Kingdom, United States, Canada, France, Germany and the Netherlands (48). Some form of international co-operation to centralize information services concerning the existence of translations is obviously needed. Because of the enormous amount of material involved, the Director of Aslib has suggested three schemes to cover the Commonwealth, the United States and Western Europe; an enquirer would need to make only one enquiry in triplicate on each occasion (49).

Another method of learning of the existence of foreign work is the published English texts of foreign periodicals. The absence of copyright difficulties has made possible a spectacular expansion of 'cover-to-cover' translation of Russian journals. With the active support of the Department of Scientific and Industrial Research, several research associations and development associations publish 'cover-to-cover' translations of various Soviet scientific and technical journals. In addition to these associations, several commercial publishers have joined in the venture. The cost of translation and the limited circulation make costs high. However, the rate of growth of these Russian cover-to-cover translations has been spectacular, but the expansion of this translating programme will largely depend on the support of librarians in particular to secure an expansion of subscription income. Details of these periodicals will be found in the DSIR's *Titles of current periodicals from the U.S.S.R. and 'cover-to-cover' translations* (50) and the National Lending Library's *Translations bulletin*, a monthly journal which commenced publication in January 1959, and is a modified version of the DSIR's *Translated contents lists*. The Special Libraries Association's *Translation monthly* and the Library of Congress's *List of Russian serials being translated into English and other Western languages* (3rd rev. ed., 1961) give similar details.

E. G. Hill states: 'Perhaps the main advantage of having

cover-to-cover translations freely available lies in the elimination of the "hit or miss" selection of translation of individual papers from important journals. The time required for this unsatisfying and expensive pastime on the part of the individual scientist is eliminated. The general literature searching problem is also simplified and a large number of translations become available at reasonable prices which are within the reach of even the most impecunious university. In theory, also, the translations are available at the earliest possible date because of the automatic production process' (51).

A scheme for sharing the cost of making translations is organized by DSIR in connection with the *Translated contents lists of Russian periodicals.* A translation is commissioned if two or more requests for the same article are received from any part of the world. Many translations have so far been made under this arrangement, which considerably reduces the cost to each party.

Aslib maintains, for the benefit of members who wish to have their own translations made, a Panel of Specialist Translators who are specialists not only in a foreign language, but also in certain subject fields.

Wilfred Ashworth has outlined the ideas of machine translation in the Aslib *Handbook* (52). The steps in translation are:

(1) The foreign language is fed into a computor in machine-readable form.
(2) Each word as received is compared with previously delivered words in store so that they can be related to each other syntactically to determine the function of each in its context.
(3) At intervals, the machine meets one of a series of predetermined stop signals (for example, the ends of grammatical clauses) and will rearrange its stored words into the syntax pattern of the new language.
(4) The words are found in a stored dictionary, and the new language equivalents substituted and printed out.

Introductions to these ideas have been presented by Andrew D. Booth (who first conceived the idea in 1946) (53) and Emile Delavenay (54) and a survey of machine translation in the U.S.S.R. by Sonya Machelson (55). A more recent article des-

cribing advances in research is by S. M. Lamb (56). There are now two periodicals devoted exclusively to this new field, *Mechanical translation*, which commenced publication in March 1954, and *La Traduction automatique* which appeared in April 1960. *Library science abstracts* covers this subject fairly extensively, but it will be some time before satisfactory machines become a proposition for the average library.

Machine translation was not considered to be of sufficient urgency to warrant serious consideration in Aslib's report, *The foreign language barrier in science and technology* (57). This report covers three main investigations: teaching scientists to read Russian, cover-to-cover translations, and the indexing and pooling of translations. It contains data as to the distribution of journals according to the number of translations made per issue, the proportion of different languages translated and the frequency of translations from individual periodicals, the number of Russian periodicals now in cover-to-cover translation in relation to the number of translations previously made of individual articles from these periodicals, the average amount of translation per issue from over 300 periodicals and information on translation pooling. This report considers the problem quantitatively and is invaluable to all concerned in the language problem facing librarians and scientists today.

9.7 Newspapers, cuttings and indexes

Among published sources for reference work the daily press must be considered the most current. Except in some special libraries, where newspapers have a permanent value for on-the-spot reporting and for the study of opinion, a very wide range of newspapers is not taken, and for ordinary purposes *The Times*, the *Guardian* and the *Financial Times* are considered adequate. In the survey of fifty-two information/library units in industrial and commercial organizations carried out in 1956–8 by Aslib (58) it is reported that 54 per cent. of the units took one or more of the national daily newspapers, an average of 3·5 each. Four which took ten or more national dailies were all units of organizations providing consumer goods or services. It appears, therefore, that the information/library units of nearly half the organizations made no provision for scanning the non-technical newspaper press, although this may have

been done in some organizations in other departments. Barbara Kyle, in the Aslib *Handbook of special librarianship and information work*, has drawn attention to the relatively small outlay required for the acquisition of newspapers compared with the costs of cutting and indexing them (an enormous number of units for every £1 spent) (59). In so far as a library may be required to keep track of references in the press to its parent organization, it will obviously be cheaper to subscribe to an outside press cuttings agency.

In maintaining a press cuttings section it is essential to define its purpose. Cuttings may be kept for information, in which case only the fullest and most accurate descriptions need be kept. They can be considered as a supplement to general reference books, which may or may not be superseded at a later date. Much of the information is of transitory interest only and consequently the files usually require frequent and severe weeding if they are to be kept within manageable bounds. It should be remembered, too, that not all newspapers are impartial in their news-coverage, and consequently a certain amount of caution should be exercised when referring to them. Those which have been mentioned, however, may be quoted without excessive caution.

Since the national libraries and the large provincial libraries keep files of the national and provincial newspapers, few special libraries do so. D. E. Davinson, in his book *Periodicals: a manual for librarians* (which was aimed at the public librarian), suggests the co-operative storage of all national newspapers and acquisition of foreign newspapers such as *Pravda* and *Le Figaro* (60). Wood pulp newsprint, however, even though stored under the most favourable conditions, has a limited life. The obvious solution is microfilm copies. In the United States, about 1,500 newspapers have been microfilmed; the British Museum has established a microfilm unit at the Colindale newspaper repository to microfilm the files which are kept there. The Manchester Public Libraries are producing a microfilm of the *Guardian* from 1821 and *The Times* is available to the public in a microfilm edition. It dates from 1785, accupies 85,000 feet of film and may be stored in the space of a four-foot cube. *The Times* issues an index which often gives sufficient information without recourse to the files themselves. Newspaper indexes

and cuttings are generally useful in tracing specific events, verifying facts, and determining elusive or disputed dates.

Newspaper indexes are best supplemented by *Keesings' contemporary archives*, a service which gives a digest of current events which is kept up-to-date by news sheets issued every few days which can be kept in a special loose-leaf file; the index of this publication is also kept up-to-date in a similar manner.

Robert L. Collison's *The treatment of special material in libraries* (61) contains a very good chapter on news clippings and indexes with suggestions for further reading. Newspaper and press cuttings are also dealt with in the Aslib *Handbook* by L. J. Anthony (62).

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APPENDIX I

WHAT IS A PERIODICAL?—OR SERIAL?

At the 52nd Annual Conference of the Library Association in 1929 one of the speakers stated that an international agreement was required as to what constitutes a periodical (or serial).[1] Such an agreement is still an urgent need, but the problem of defining what is and what is not a periodical or serial was not new in 1929. The late Mr Charles W. E. Leigh, in an article written in 1933,[2] revealed that when the first union list of periodicals ever issued in this country[3] was in the process of compilation this same problem was encountered. He writes, however, that the problem 'was solved by the decision to regard as a "periodical" or "serial publication" any publication issued at regular or irregular intervals with a consecutive numeration, and with no predetermined termination'. The significant part of this statement, however, is the lack of distinction drawn between a periodical and a serial.

C. A. Cutter, in his *Rules for a dictionary catalog* (4th ed., 1904), offered the following definitions:

Periodical. A work issued at intervals which are usually regular; it is generally written by many contributors.

Serial. A publication issued in successive parts, usually at regular intervals and continued indefinitely.

In the *Cataloguing rules* compiled by Committees of the Library Association and of the American Library Association (1908), and commonly known as the Joint Code, these definitions were expanded as follows:

Periodical. A publication intended to appear in successive numbers or parts at more or less regular intervals and, as

[1] Smith, W. A. Towards union cataloguing. 2. in science. (ii) The world list of scientific periodicals. *Library Association*, papers read at the 52nd annual conference, Brighton, September 9th–14th, 1929, pp. 30–4.

[2] Leigh, C. W. E. On the cataloguing of serial publications, with special reference to the compilation of union lists of periodicals. *Library Association record*, vol. 3, ser. 3, no. 1, January 1933, pp. 1–11.

[3] List of current scientific serial publications received by the principal libraries of Manchester. Manchester, 1898.

a rule, for an indefinite time. Each part properly contains matter on a variety of topics, generally by several contributors.

Newspapers, and the memoirs, proceedings, journals, etc., of societies are not considered regular periodicals under the rules.

Serial. A publication issued in successive parts, usually at regular intervals, and, as a rule, intended to be continued indefinitely. Serials include periodicals, annuals (reports, yearbooks, etc.), and memoirs, proceedings, and transactions of societies.

J. H. Gable, in his *Manual of serials work*,[1] has given two further definitions:

Periodical. A serial issued at definite intervals under a distinctive title; or, to eliminate the definition for *serial*, a periodical is a publication issued at regular intervals, with some scheme for consecutive numbering, intended to be continued indefinitely, and with a distinctive title.

Serial. Any publication, whether issued at regular or irregular intervals, with some scheme for consecutive numbering, and intended to be continued indefinitely.

This author mentions eight other definitions of a periodical, with slight variations, collected from fifteen different libraries. He also gives the following:

A.L.A. college and university library statistical report, 1935, p. [2].

Periodical. A publication appearing at regular intervals of less than a year and continuing for an indefinite period.[1]

Dr J. I. Wyer's *Reference work*[2] defines a serial as 'a publication which appears in successive parts or numbers, usually at regular intervals and which from its character, auspices, or name, seems to carry assurance of indefinite appearance'.

[1] Gable, J. Harris. Manual of serials work. Chicago, American Library Association, 1937, p. 28.

[2] Wyer, James I. Reference work. Chicago, American Library Association, 1930, p. 40.

Louis Shores in his book[1] extends this further as 'any publication issued serially or in successive parts more or less regularly'.

Dr Wyer includes in his class periodicals, newspapers, government documents, publications of learned and other societies, reports of institutions, and annuals (directories, yearbooks, almanacs, etc.). Mr Shores' definition, however, was extended for his purposes to include 'miscellaneous pamphlet publications as well, including such material as might find its way to the Wilson *Vertical file service*, which lists many out-and-out serial publications as well as separate ephemeral pamphlets'.

H. A. Sharp has attempted to distinguish between the two publications by the following definitions[2]:

Periodical. Strictly, to be distinguished from a serial in that while it appears at intervals, not necessarily stated ones, the publication extends for an indefinite time. To be distinguished *in cataloguing*[3] from memoirs, proceedings, transactions, etc., of a society.

Serial. Any publications in parts, appearing at intervals, usually regular ones. The term includes periodicals, annuals, and proceedings or memoirs of societies; e.g. Number 17, Part 7, Monographs 18, 42nd Annual Report.

The A.L.A. *Glossary of library terms* (Chicago, 1943) offer us:

Periodical. A publication with a distinctive title intended to appear in successive (usually unbound) numbers or parts at stated or irregular intervals and, as a rule, for an indefinite time. Each part generally contains articles by several contributors.

Newspapers, whose chief function it is to disseminate news, and the memoirs, proceedings, journals, etc., of societies are not considered periodicals under the rules for *cataloguing*.[3]

Serial. A publication issued in successive parts, usually at regular intervals, and, as a rule, intended to be continued

[1] Shores, Louis. Basic reference books. Chicago, American Library Association, 1939, pp. 143, 144.

[2] Sharp, H. A. Cataloguing, 4th ed. Grafton, 1948. Appendix II. Definitions of terms.

[3] The italics are mine.—D. G.

> indefinitely. Serials include periodicals, annuals (reports, yearbooks, etc.), and memoirs, proceedings, and transactions of societies.

It is obvious from the foregoing that there is not unanimous agreement as to the meaning of the terms 'periodical' and 'serial'. With the exception of the *A.L.A. college and university library statistical report*, all are unanimous, however, that memoirs, proceedings, transactions, etc., of a society are *not* to be classed as periodicals, although Mr Sharp and the *A.L.A. glossary of library terms* imply that this distinction need only apply when cataloguing. The *Cataloguing rules* do not class newspapers as a periodical, whereas those definitions offered by the *A.L.A. college and university library statistical report* and Mr Gable include them as such. Mr Gable's simple definition of a serial has much to commend it, particularly as it does not conflict with the *Cataloguing rules*. Mr Shores', however, is treading on dangerous ground, embracing as it does pamphlet material and possibly publishers' series.

The term 'serial', although it has such a wide connotation, finds comparatively little mention in professional literature, whilst in everyday usage the term 'periodical' is used now more in the sense of the term 'serial' in the *Cataloguing rules* or as defined in the *A.L.A. college and university library statistical report*. This broad interpretation of the term 'periodical' has been applied far more frequently to union lists in this country rather than the term 'serial', which has been more rigidly adhered to in the United States.

The greatest union list ever issued, the *Union list of serials in libraries of the United States and Canada*, edited by Winifred Gregory (2nd ed., New York, Wilson, 1943, Supplement, 1945), in its first edition (1927) defined a serial as:

> A publication not issued by a government agency, appearing at regular or stated periods of less than a year, and including articles on various subjects.

This definition was limited purposely to define the scope of the *Union list* and to avoid duplication of work already done by other publications covering government publications and annuals.

The first union catalogue of periodicals issued in this country (see p. 183) set a precedent by calling them serials in the title. This precedent was not followed, however, by the first edition of the *World list of scientific periodicals* (Oxford University Press, 1925), which stated in its preface:

> The term periodical has not been too severely restricted. More regard has been had to utility than to the obtaining of a rigid consistency.

It may also be instructive to give the following extracts from the rules drawn up as a guide to the cataloguer of the *Union catalogue of the periodical publications in the university libraries of the British Isles* (National Central Library, 1937).[1]

(2) The following items are to be included:
(*a*) All publications of a periodical nature whether published by an official body or not.
(*b*) All publications which are issued at regular or irregular intervals, whether or not they have a running number.
(*c*) All newspapers which are kept in the library.
(*d*) Such publications as Directories, *Whitakers' almanack*, *Who's who*, *Minerva*, *English catalogue of books*, if the back numbers are filed in the library.

In the preface to this publication the following explanation is given:

> The Editorial Board may be criticized for including certain publications of doubtful value and others which may be considered outside the scope of a catalogue of 'periodicals'. These publications have been included because the libraries possessing them have entered them as 'periodicals' in their own catalogues.

In the *Catalogue of the periodicals in the libraries of the University of Bristol* (Bristol, The University [1940]), it states that 'The usual definition of a periodical as "something in a continuous series with a consecutive number and no predetermined end" has been followed'.

[1] Newcombe, Luxmore. Towards union cataloguing. 3. In London and in the university libraries. *Library Association*, papers read at the 52nd annual conference, Brighton, September 9th–14th, 1929, pp. 35–40.

Appendix I

In the *Rules and definitions* governing the *British union catalogue of periodicals* a periodical has been defined as follows:[1]

1. (*a*) A periodical is a publication, other than a single work issued in parts, successive numbers of which are published at intervals.
   (*b*) This definition applies to all such publications other than those specified in para. 3, whether issued independently or by organizations or conferences of whatever kind, governmental, public, humanistic, scientific, technical, industrial, etc., and issued at whatever intervals. . . .

3. The following types of periodicals are excluded:
   (*a*) Newspapers first published after 1799. . . .
   (*b*) The variant issues of periodicals published centrally and put out with various imprints and/or minor differences.
   (*c*) Periodicals not printed from types unless they are clearly of more than ephemeral interest.
   (*d*) Publications which are given the superficial appearance of periodicals by being described as successive volumes or parts, or published at short or regular intervals, but which are, in fact, successive editions of a single work. Yearbooks and similar works are included, however, when they are of special interest.
   (*e*) Statutory company reports, financial statements and the like.

Further examples could be quoted which prove that the term 'serial' is becoming unpopular and a more comprehensive interpretation is being given to the term 'periodical'. The latter term finds almost universal favour in other European countries, added to which it is one which is more easily interpreted by the layman. Whether a distinction is necessary is a highly debatable point and warrants the closest examination by those responsible for the various aspects of international standardization in library work.

[1] British union catalogue of periodicals. Rules and definitions. *Journal of documentation*, vol. 2, no. 2, January 1946, pp. 92-8.

APPENDIX II

NATIONAL AND INTERNATIONAL BIBLIOGRAPHIES AND LISTS OF HOUSE JOURNALS

AFRICA

Advertising and press annual of all Africa. Cape Town, National Publishing Co., 1962. 398 pp.

Indexing of West African periodicals. *WALA news*, vol. 3, no. 4, February 1960, pp. 178–80.

Ruth Sloan Associates. The press in Africa, edited by Helen Kitchen. Washington, Ruth Sloan Associates, 1956. 96 pp.

United States. Library of Congress. General Reference and Bibliography Division. *Reference Department*. Serials for African studies, compiled by Helen F. Conover. Washington, the Library, 1961. vii, 163 pp.

ARGENTINA

Guía de las publicaciones especializadas y técnicas argentinas. Buenos Aires, Asociación de la Prensa Técnica Argentina, 1959. 64 pp.

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Handbuch Österreichs Presse, Werbung, Graphik. Wien, Verband Österreichischer Zeitungsherausgeber, 1953–

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Hove, Julien van. Répertoire des périodiques paraisant en Belgique. Brussels, Librairie Encyclopédique, 1951. 358 pp.; Supplément. 1955. 305 pp.; Supplément. 1960. 215 pp.

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Journals. Praha, Publishing House of the Czechoslovak Academy of Sciences, 1959. 78 pp.

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Dansk tidsskriftfortegnelse. Danish periodicals. 2nd ed., Copenhagen, Dansk Bibliografisk Kontor, 1955. 160 pp.

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Suomen Kirjallisuupalvelun Seura. List of Finnish technical periodicals, compiled by Elin Tornudd. Helsinki, Suomen Kirjallesuuspalvelen, 1957. 10 pp.

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Annuaire de la presse française et étrangere et du monde politique. Paris, Annuaire de la Presse, 1878–

Arbour, Roméo. Les revues littéraires, éphemères paraissant à Paris entre 1900 et 1914. Paris, Librairie José Conti, 1956. 93 pp.

Prinet, Jean. Répertoire de la presse et des publications périodiques françaises. *Bulletin de la bibliographie de la France*, vol. 3, no. 1, January 1958, pp. 25–7.

Raux, H. F. Répertoire de la presse et des publications périodiques françaises, 1960. Paris, Editions de la Documentation, françaises, 1961. xxix, 1161 pp.

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Berlin. Freie Universität. Institut für Publizistik. Die deutsche Presse, 1956. Zeitungen und Zeitschriften. Berlin, Dunker und Humblot, 1956. 168, 1026 pp.

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Moid, A., *and* Siddiqui, A. H. A guide to periodical publications and newspapers of Pakistan. Karachi, Pakistan Bibliographical Working Group, 1953. iv, 60 pp.

Pakistan National Scientific and Technical Documentation Centre. Scientific and technical periodicals of Pakistan. Karachi, the Centre, 1961. 12 pp. (Paradoc bibliography, no. 303).

POLAND

Catalogue of Polish newspapers and periodicals. Warsaw, Prasa i Ksiazka, 1956.

Wepsiec, Jan. Polish periodicals, 1953–56: an annotated bibliography. Washington, Catholic University of America Press, 1957. v. 169 pp.

PORTUGAL

Centro de Documentação Científico. Periódicos portugueses de ciéncias, letras e artes. 2nd ed., Lisbon, the Centre, 1953. 34 pp.

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Newspapers and periodicals from Rumania. Bucarest, Cartimex, 1959.

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Bjorkbom, C. Swedish catalogues and bibliographies of periodicals. *Journal of documentation*, vol. 15, no. 1, March 1959, pp. 17–20.

Duering, Ingemar. Current Swedish periodical publications in the fields of science and learning. Stockholm, Almqvist & Wiksell, 1951. 45 pp.

Current Swedish scientific and technical periodicals. Stockholm, the Swedish Institute, 1959. 50 pp.

800 svenska facktidskrifter. Stockholm, AB Nordiska Bokhandelns Förlag, 1952. 84 pp.

Svensk annonstaxa. Stockholm, Tidningsstatistik AB, 1963. 476 pp. Loose-leaf.

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Schweiz. Zeitschriftenverzeichnis, 1956–60. Zürich, Verlag des Schweizerischen Buchhändler- und Verleger Vereins, 1961. 186 pp.
Schweizer Werbeagenda. Aarau, Rengger-Verlag, 1962/3.
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Tunisia. Bibliothèque National, Tunis. Recapitulation des périodiques officiels parus en Tunisie de 1881 à 1955. Tunis, Imprimerie *La Rapide*, 1956. 108 pp.

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Beyerly, Elizabeth. Lists of Soviet periodicals: a review. *Journal of documentation*, vol. 15, no. 2, June 1959, pp. 100–5.
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Maichel, Karol. Bibliographical guides to Russian periodical publications, 1901–56. *College and research libraries*, vol. 19, no. 3, May 1958, pp. 209–16.
Maichel, Karol. A selected list of Soviet scientific journals. *Special libraries*, vol. 49, no. 5, May–June 1958, pp. 197–204.
Periodicheskaia pechat' S.S.S.R., 1917–49; bibliograficheskii ukazatel': zhurnaly, trudy i biulleleni po transportu, sviazi i kommanolnomu delu. Moscow, Vsesoyuznaya Palata, 1955. 123 pp.
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United States. National Science Foundation. *Office of Science Information Service.* List of Russian scientific journals available in English. Washington, the Foundation, 1960. 13 pp.

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Ayer, N. W., *and* Sons. N. W. Ayer and Sons' directory of newspapers and periodicals, a guide to publications printed in the United States and possessions, the Dominion of Canada, Bermuda, Cuba and the West Indies. Philadelphia, Ayer, 1880–
The Editorial directory; business, industrial, professional publications. New York, Galub Publishing Co., 1952–
Faxon, F. W., *firm.* The Faxon librarian's guide to periodicals and American subscription catalog. Boston, Faxon, 1938–

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GEBBIE PRESS, *firm*. House magazine directory; a public relations and free-lance guide to the nation's leading house magazines, 1954–5 ed. New York, Gebbie Press, 1954. ii, 272 pp.

Printers' Ink directory of house organs: internal, external, and combinations. New York, Printers' Ink Publishing Co. Inc., 1950. 162 pp.

UNITED STATES. Library of Congress. Science Division. Scientific and technical serial publications; United States, 1950–3. Washington, Library of Congress, 1954. viii, 238 pp.

WOOD James P. Magazines in the United States. 2nd ed., New York, Ronald Press, 1956. 403 pp.

YUGOSLAVIA

Catalogue of newspapers and magazines in Yugoslavia. Beograd, Jugoslovenska Knjiga, 1963. 91 pp.

INTERNATIONAL (GENERAL)

Births, deaths and magazine notes: a record of new titles, changed titles, and deaths in the periodical world. In *Bulletin of bibliography*. Boston, Faxon, 1900–

Ulrich's periodicals directory: a classified guide to a selected list of current periodicals, foreign and domestic, edited by E. C. Graves. 9th ed., New York, Bowker, 1959. 825 pp.

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ALLEN, J. W. A selected bibliography of economic reference works and professional journals. Baltimore, Johns Hopkins University, Department of Political Economy, 1956. 50 pp. (Economic Library selections, series II: Basic lists in special fields, no. 3).

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BIRD, M. E., *ed.* The international guide to literary and art periodicals . . . London, Villiers Press, 1959. 91 pp.

BOEHM, Eric H., *and* ADOLPHUS, Lalit, *eds.* Historical periodicals: an annotated world list of historical and related serial publications. Santa Barbara, Calif., Clio Press, 1961. xviii, 619 pp.

BROWN, Charles Henry. Scientific serials, characteristics and lists of most cited publications in mathematics, physics, chemistry, geology, physiology, botany, zoology and entomology. Chicago, Association of College and Reference Libraries, 1956. iv, 189 pp. (ACRL monograph, no. 16).

BRUGGHEN, W. van der. Library and documentation periodicals. Prelim. ed., The Hague, International Federation for Documentation, 1956. 36 pp. (FID publication 295).

CAMPBELL, A. D. Periodicals: an annotated list for school libraries. London, published for the School Library Association in Scotland by the School Library Association, 1956. 24 pp.

CHATTERJI, N. W. Periodicals in the field of agriculture. *Indian librarian*, vol. 13, no. 4, March 1959, pp. 142–65.

CINÉMATHÈQUE DE BELGIQUE. Répertoire mondial des périodiques cinématographiques. World list of film periodicals and serials. Brussels, La Cinémathèque, 1955.

CLOUGH, F. F., *and* CUMING, G. J. Phonographic periodicals: a survey of some issued outside the United States. *Notes*, vol. 15, no. 4, September 1958, pp. 537–58.

DAVIS, Edward P. Periodicals of international organizations. Pt 1. The United Nations and specialized agencies. Pt 2. Inter-American organizations. Washington, Pan-American Union, 1950. 21 pp. (Columbus Memorial Library bibliographic series, no. 33).

DOBLER, Lavinia. Magazines for the youth around the world. *Library journal*, vol. 85, no. 8, April 15, 1960, pp. 1647–9.

FARBER, Evan Ira. Classified list of periodicals for the college library. 4th ed., Boston, Faxon, 1957. 146 pp. (Useful reference series, no. 86).

FIRTH, E. G., *ed.* Early Toronto newspapers, 1793–1867 . . . Toronto, Baxter Publishing Company, in co-operation with the Toronto Public Library, 1961. 31 pp.

FRAENKEL, Josef, *compiler*. The Jewish press of the world. 3rd ed., London, World Jewish Congress, 1954. 49 pp.

GERSTENBERGER, Donna, *and* HENDRICK, George, *compilers*. Directory of periodicals publishing articles in English and American literature and language. Denver, A. Swallow, 1960. 178 pp.

GUMMER, H. M. Catalogues and bibliographies of periodicals: a survey of the more important works published in the British Commonwealth and the United States of America since 1945. *Journal of documentation*, vol. 12, no. 1, March 1956, pp. 24–38.

HARRIS, Chauncy D. An annotated world list of selected current geographical serials in English: with an appendix of major periodicals in various languages regularly providing English summaries of articles, or periodicals partly in English or partly in other languages. Chicago, University of Chicago, Department of Geography, 1960. 14 pp.

HOFFMAN, F. J., *and others*. The little magazine: a history and bibliography, by F. J. Hoffman, C. A. Allen and C. F. Ulrich. Princeton, University Press, 1946. ix, 440 pp.

HOUGHTON, Walter E. British periodicals of the Victorian age: bibliographies and indexes. *Library trends*, vol. 7, no. 4, April 1959, pp. 554–565.

MCCANDLESS, R. F. J., *and others*. Secondary journals in chemical and biological fields, by R. F. J. McCandless, Elizabeth A. Spavier and Maxwell Gordon. *Journal of chemical documentation*, vol. 4, no. 3, July 1964. pp. 147–53.

MAIZELL, R. E., *and* SIEGEL, F. The periodical literature of physics: a handbook for graduate students. New York, American Institute of Physics, 1961. 15 pp.

MARTIN, *Brother* David. Representative American Catholic periodicals. *Serial slants*, vol. 7, July 1956, pp. 133–6.

MOREAU, Jules L. Periodical literature of theological libraries. *Library trends*, vol. 9, no. 2, October 1960, pp. 231–42.

MYSON, W., *compiler*. Surrey newspapers: a handlist and tentative bibliography. Wimbledon, printed for the Surrey Libraries Group by Wimbledon Borough Council, 1961. 36 pp.

NEW YORK. Public Library. Russian journals of mathematics: a survey and checklist, by H. A. Steeves. New York, the Library, 1961. 19 pp.

OBOLER, Eli M. U.S. library periodicals: a selected list. *Canadian library*, vol. 17, no. 2, September 1960, pp. 77–80.

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Périodiques relatifs aux sciences administratives. *La documentation en France*, vol. 27, no. 1, January–February 1959. 10 pp. (Aide-mémoire du documentaliste).

PULLEN, William A. A check list of legislative journals issued since 1937 by the States of the United States of America. Chicago, American Library Association, 1955. 57 pp.

REDMAN, A. R. A classified list of current periodicals in the fields of athletics, health, physical education and sports published in the United States and Canada. Indianapolis, Indiana, *Physical educator* (Reprinted from the March and May 1956 issues).

RIFE, C. David, *compiler*. Aeronautics and astronautics: a world list of current periodicals. New York, Special Libraries Association, Science-Technology Division, 1960. vii, 75 pp.

SOCIAL SCIENCES DOCUMENTATION. Survey of criminological journals: a handlist of periodicals of interest to students of criminology with their locations in certain London libraries. London, Institute for the Study and Treatment of Delinquency, 1958. 8 pp.

TRIMBLE, R. J. The periodical literature of inorganic chemistry. *Journal of chemical education*, vol. 37, no. 8, August 1960, pp. 419–21.

UNESCO *and* THE EDUCATIONAL PRESS ASSOCIATION OF AMERICA. An international list of education periodicals. Paris, Unesco, 1957. 200 pp.

UNESCO. INTERNATIONAL COMMITTEE FOR SOCIAL SCIENCES DOCUMENTATION. World list of social science periodicals. 2nd ed. rev. and enl., Paris, Unesco, 1957. 210 pp.

UNION OF INTERNATIONAL ASSOCIATIONS. Directory of periodicals published by international organizations. 2nd ed., Brussels, UIA, 1958. x, 241 pp.

UNITED STATES. Department of Commerce. *Bureau of Foreign Commerce*. A guide to foreign business directories. Washington, U.S. Government Printing Office, 1959. vii, 132 pp.

UNITED STATES. Department of Commerce. *Bureau of the Census*. Bibliography of social science periodicals and monograph series: Greece, 1950–61. Washington, U.S. Government Printing Office, 1962. iv, 19 pp.

United States. Library of Congress. *Science Division.* Biological sciences serial publications: a world list, 1950–4. Prepared under the sponsorship of the National Science Foundation. Philadelphia, Biological Abstracts, 1955. 269 pp.

United States. Library of Congress. *European Affairs Division.* The European press today. Washington, Library of Congress, 1949. 152 pp. Suppl. The press in Turkey, 1949. 6 pp.

Verein Deutscher Ingenieure. Dokumentationsstelle Fachdokumentation Textiltechnik. Zeitschriftenverzeichnis Textiltechnik; bearn. von Ingrid Gawlass und Franz-Josef Neeb. Düsseldorf, VDI, 1957. 74 pp.

World Medical Association *and* International Union of the Medical Press. World medical periodicals. 2nd ed., prepared by L. T. Morton. New York, WMA, 1957. xxxiii, 340 pp.

Wright, E. Historical periodicals in Britain and the U.S. *Library review,* no. 130, Summer 1959, pp. 106–10.

APPENDIX III

BOOKSELLERS SPECIALIZING IN PERIODICAL LITERATURE

London

Bailey Bros. & Swinfen, Ltd,
Hyde House, West Central Street, W.C.1.

Collet's Russian Bookshop,
Russian and Multilingual, 45 Museum Street, W.C.1.

William Dawson & Sons, Ltd,
10 Macklin Street, W.C.2.

Dillon's University Bookshop,
1 Malet Street, W.C.1.

Gordon & Gotch, Ltd,
75–9, Farrington Street, E.C.4.

Hachette,
127 Regent Street, W.1

International University Booksellers, Ltd,
39 Store Street, W.C.1

H. K. Lewis & Co., Ltd,
136 Gower Street, W.C.1

Hans Preiss (International Booksellers) Ltd,
14 Bury Place, W.C.1

Probsthain & Co.,
41 Great Russell Street, W.C.1

Scientific Book Supply Service, Ltd,
10 Birkbeck Hill, S.E.21

Stechert-Hafner, Inc.,
2 Star Yard, Carey Street, W.C.2

B. F. Stevens & Brown, Ltd,
79 Duke Street, Grosvenor Square, W.1

Provinces

Basil Blackwell, Ltd,
50 Broad Street, Oxford

Deighton, Bell & Co., Ltd,
13 Trinity Street, Cambridge

Oliver & Boyd, Ltd,
Tweeddale Court, 14 High Street,
Edinburgh, 1

Parker & Son, Ltd,
27 Broad Street, Oxford

W. Heffer & Sons, Ltd,
3 Petty Cury, Cambridge

Robert Maxwell & Co., Ltd,
Waynflete Building, The Plain,
Oxford

W. Hartley Seed,
52 Church Street, Sheffield, 1

Thornton & Son,
11 Broad Street, Oxford

APPENDIX IV

BRITISH UNION CATALOGUES AND LISTS OF HOLDINGS

ASLIB. *Electronics Group.* Union list of periodicals on electronics and related subjects, compiled by R. England. London, the Group, 1961. 62 pp. mimeog.

ASLIB. *Textile Group.* Union list of holdings of textile periodicals. 3rd ed., London, the Group, 1962. i, 37 pp.

BRITISH UNION-CATALOGUE OF PERIODICALS: a record of the periodicals of the world from the seventeenth century to the present day, in British libraries. Edited by James D. Stewart with Muriel E. Hammond and Erwin Saenger. London, Butterworth. vol. I, A–C, 1955. xxxi, 691 pp.; vol. II, D–K, 1956. xxxi, 677 pp.; vol. III, L–R, 1957. xxxi, 767 pp.; vol. IV, S–Z, 1958. xxxi, 630 pp. Suppl. to 1960, 1962, xxxv, 991 pp.

CAMBRIDGE. University. *Library.* Current periodicals available in the university library and in other libraries connected with the university, 1960. Cambridge, the Library, 1960. vii, 462 pp. Supplement 1961, 40 pp.

CAMBRIDGE. University. *School of Agriculture.* Agricultural periodicals of the British Isles, 1681–1900, and their location. Compiled by F. A. Buttress. Cambridge, the School, 1950. 16 pp.

CICRIS (Co-operative Industrial and Commercial Reference and Information Service). Select union list of periodicals held by members, compiled by Acton Public Libraries. 2nd ed. London, 1962. x, 231 pp. mimeog.

CRICK, B. R., *and* DALTHROP, A. List of American newspapers up to 1940 held by libraries in Great Britain and Ireland. Edinburgh, British Association for American Studies, 1958. [6], 90 pp. (Suppl. to *Bulletin of the British Association for American studies*, no. 7).

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UNITED KINGDOM ATOMIC ENERGY AUTHORITY. Atomic Energy Research Establishment. *Library.* Periodicals held by the Library as at August 1960. London, H.M.S.O., 1960. [4], 74 pp.

APPENDIX V

MEMBERS OF THE LIBRARY BINDERS' SECTION OF THE BRITISH FEDERATION OF MASTER PRINTERS

F. J. Blissett & Co.,
Palmerston Works, Roslin Road, Acton, London, W.3

G. Blunt & Sons, Ltd,
North Acton Road, Harlesden, London, N.W.10

Boots Pure Drug Co., Ltd,
Printing Department, Station Street, Nottingham

Cambrian News (Aberystwyth), Ltd,
Terrace Road, Aberystwyth

P. G. Chapman & Co., Ltd,
Kent House Lane, Beckenham, Kent

Cedric Chivers, Ltd,
Portway, Bath

Dunn & Wilson, Ltd,
Bellevue Bindery, Falkirk

Dunn & Wilson Bookbinders (Leeds), Ltd,
Parkfield Mill, Morley, Leeds

Walter Newbury, Ltd,
Grangewood Street, East Ham, London, E.6

B. Riley & Co., Ltd,
Leeds Road, Huddersfield

W. H. Smith & Son, Ltd,
Albert Embankment, London, S.E.1

J. Starr & Sons, Ltd,
Dawber Street Works, Wigan

APPENDIX VI

FOREIGN UNION CATALOGUES AND LISTS OF HOLDINGS

ARGENTINA

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Seppälä, Arvo. Medical periodicals and serials in the libraries of Finland: union list of foreign publications. Helsinki, University of Helsinki, 1960. xxiii, 355 pp.

FRANCE

BIBLIOTHÈQUE NATIONALE. Catalogue collectif des périodiques conservés dans les bibliothèques de Paris et dans les bibliothèques universitaires de France. Périodiques slaves en caractères cyrilliques: état des collections en 1950. Paris, la Bibliothèque, 1956. 2 vols.

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FRANCE. Direction des Bibliothèques. Inventaire des périodiques éntrangers reçus en France par les bibliothèques et les organismes de documentation en 1957–58. Paris, Bibliothèque Nationale, 1959. 1093 pp.

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Ward, William S., *compiler*. Index and finding list of serials published in the British Isles, 1789–1832. Lexington, University of Kentucky Press, 1953. xv, 180 pp.

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